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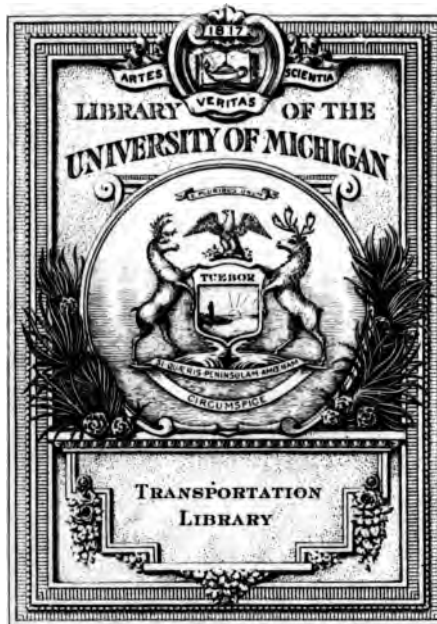
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The Railways of South and Central America

A Manual Containing Statistics and
other Information Concerning the Im-
portant Railways of South and Central
America, Mexico and the West Indies



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PAN-AMERICAN BUILDING, WASHINGTON, D. C.

HOME OF THE PAN-AMERICAN UNION, AN INTERNATIONAL ORGANIZATION DEVOTED TO THE DEVELOPMENT AND ADVANCEMENT OF COMMERCE, FRIENDLY INTERCOURSE AND GOOD UNDERSTANDING AMONG THE TWENTY-ONE AMERICAN REPUBLICS.

H. E. Riggs.

The Railways of South and Central America

A Manual Containing Statistics and
other Information Concerning the Im-
portant Railways of South and Central
America, Mexico and the West Indies

Frederic *M. J.* Halsey

With Jas. H. Oliphant & Co., Bankers, New York



1914 Edition



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PREFACE.

This volume is compiled with the idea of giving a brief description of a number of the railways operating in South and Central America, Mexico and the West Indies, and is divided into three parts:

- I. South America.
- II. Mexico, Central America and Panama.
- III. The West Indies.

The method used in compiling this book will commend itself readily to the reader. Each of the three parts is divided into chapters, each of which covers a country, or a group of countries, islands, etc.; and contains: (1) a description of the railway development in and other information regarding the country or countries; (2) tables (where possible) and notes giving details as to capitalization, mileage, earnings, financial condition, amount of freight and number of passengers handled, history, location and nature of country traversed by each of the various railway lines under discussion. The Tables in a majority of cases are rendered expressed in Pounds Sterling and American Gold; for convenience sake the basis of \$5.00 per £ is used. At the end of the book will be found Appendices containing additional information of interest.

The opening of the Panama Canal in the immediate future and the rapid development of Latin America, particularly Argentine, Brazil, Chili and Uruguay, is attracting a great amount of interest throughout the United States, and the writer, who for a number of years has, in the capacity of Statistician for Messrs. Jas. H. Oliphant & Co., New York and Chicago, assisted Mr. Floyd W. Mundy in the compilation of the "Earning Power of Railroads," has felt the necessity of a volume covering briefly the railways operated in American Countries other than the United States and Canada.

The compilation of this manual has necessitated a considerable amount of labor; the official annual reports of the companies

under review not being obtainable, except in a few instances, in the United States; other information being generally hard to obtain and often conflicting. Every possible endeavor has been made to make the book fully accurate. A few details have been added, unusual for a Statistical Volume, such as a brief account of the building of Meiggs' famous Oroya or Central of Peru Ry., "the highest line in the world," which reaches the altitude of 15,865 feet; details of the loans contracted by Honduras in the building of its ill-fated Trans-Continental Ry., etc.

In conclusion the writer wishes to express his thanks to the Pan-American Bureau, Washington, D. C., for permission to use the Map of the Railways of Latin America, to be found at the front of the volume and for other information furnished him.

FREDERIC M. HALSEY.

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INTRODUCTION.

During the past ten years, and especially during the past two or three years, there has been awakened throughout the United States a lively interest in our sister Republics in South America. Realizing that with the opening of the Panama Canal new currents of trade will be created, North American merchants and manufacturers and financial and diplomatic interests have been studying more closely than ever before the commercial, economic and social conditions of our southern neighbors. European nations have for years commanded the lion's share of South America's trade; with the opening of the Panama Canal the United States will have decided economic advantages in developing commerce with South America owing to the factors of time and distance; the importance of the Panama Canal in relation to these factors is gained by reference to the fact that the Canal itself and the western coast of South America are about due south of the eastern coast of the United States.

South America presents itself as the natural field for the extension of our foreign trade. With our awakening interest in the vast areas and possibilities and in the remarkable agricultural, mining and commercial resources of the Southern Republics, there has come to us a knowledge of their material progress during recent years. A number of these republics are indeed modern countries, a rapidly increasing number of their cities are adorned with magnificent boulevards, parks and public buildings and served by well equipped traction lines, electric lighting, gas and water works; the educational advantages offered by South American universities, professional schools, libraries, etc., are liberal beyond the conception of most North Americans.

Perhaps in no phase of its material progress has Latin America made greater strides than in the extension and development of its transportation systems. In a large majority of these republics extensive plans have been worked out and pursued in the matter of building lines in aid of the exploitation of the resources of

Central and South America. Foreign capital amounting to scores of millions sterling has been enlisted in the building of railroad lines. In more recent years capital to a large aggregate amount from the United States has sought investment in South American railroads.

Recognizing the growing interest of North Americans in the republics to the south, but more especially the widening influence which they will likely from now forward exert in the development of the resources of South America, the author, Mr. Halsey, conceived the idea of presenting in book form the salient facts in regard to railroads in Central and South America.

By reason of his close study of the financial history of American railroads, extending over a period of years, Mr. Halsey is well fitted to undertake the work which he has so ably executed in the preparation of this book. The information given here is presented in concise fashion, is readily intelligible and should be most interesting not only to North American bankers and investors, but also to railroad men and others concerned in the affairs of steam transportation companies.

FLOYD W. MUNDY.

PART I.

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SOUTH AMERICA



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RAILWAYS OF SOUTH AND CENTRAL AMERICA

ARGENTINE REPUBLIC.

Argentina, the richest nation per capita in the world, stands ninth in railway mileage, being surpassed only by the United States, Germany, Russia, France, India, Great Britain, Austria-Hungary, and the Dominion of Canada. If the present rapid expansion continues it will soon rank much higher. The first railway in operation in the Republic was a little six-mile line from Buenos Ayres to Flores, which was chartered in January, 1854, and opened in 1857. This tiny stretch of track now forms part of the Buenos Ayres Western Ry. and its cost was \$285,108. Its earnings for the first year were \$19,185; and its expenses \$12,448. Since then the railways of the country have expanded as follows:

Years.	Length. Miles.	Capital in- vested.	Passengers. Number.	Freight. Metric tons.	Receipts.	Expenses.
1865....	154	\$5,379,898	747,684	71,571	\$563,134	\$438,961
1870....	454	18,835,703	1,948,585	274,501	2,502,569	1,356,252
1880....	1,560	62,964,486	2,751,570	772,717	6,560,417	3,072,185
1890....	5,848	321,102,691	10,069,606	5,420,782	26,049,042	17,585,406
1900....	10,269	531,398,720	18,296,422	12,659,831	41,401,348	23,732,754
1905....	12,072	627,230,616	26,636,211	22,409,995	71,594,919	39,396,094
1909....	15,815	898,913,000	50,830,000	31,955,000	103,578,000	62,272,000
1912....	*20,400	1,120,210,000	68,457,090	33,640,206	119,333,796	75,680,837

*Of these 20,400 miles, 12,360 miles were broad, that is, 1.676 meters (5½ feet) gauge; 1,645 miles were medium, 1.435 meters (4 feet 8½ inches) or standard gauge; and 6,397 miles were narrow, that is, 1 meter (3.28 feet) gauge.

The above statistics have been taken from the pamphlet "Argentine Republic" issued by the Pan American Union.

The four principal lines in operation 1912-13 were the following:

	Avg. Miles operated 1912-13	Gross	Per Mile
Buenos Ayres & Pacific Ry.....	3,404	\$27,953,066	\$8,212
Buenos Ayres Great Southern Ry..	3,544	32,846,724	9,268
Buenos Ayres Western Ry.....	1,781	14,530,040	8,158
Central Argentine Ry.....	2,994	32,446,730	10,837

These are followed, though not in the order named, by the Entre Rios Rys., Argentine North Eastern Ry., Cordoba Central Lines, the Provincial Rys. of Santa Fe, etc. The Argentine Ry., an American Company, incorporated July, 1912, in the State of Maine, U. S. A., has acquired a large or controlling interest in each of these four last mentioned companies. As the various railways of Argentina are described on the pages to follow, only a brief mention of them will be made here.

THE RAILWAYS OF SOUTH

The Buenos Ayres Western Ry. is the oldest line at present operating in the Republic. It did not prosper in its first years and finally fell into the Government's hands only to be sold in 1890 to its present British owners who have operated it with great success. Its credit is very high and the holders of its Ordinary Stock have annually been receiving dividends of 7% to 7½% for eleven or twelve years.

The Buenos Ayres Great Southern Ry. is another thoroughly successful railway. Its great network of lines, covering the largest mileage of any system in the country, serve a rich and fertile district throughout the eastern portion of the State of Buenos Ayres and forming a direct line from the city of Buenos Ayres to Bahia Blanca. From the latter city, now a place of great commercial importance, the system is being extended into the less settled country forming the southerly portion of La Pampas and the districts of Rio Negro and Neuquen.

The line to the last mentioned territory follows the Rio Colorado and later the Rio Negro to the town of Neuquen from where an extension of 116 miles to Zalapa has recently been completed. Zalapa is not far distant from the Chilian borders towards which the line is heading. The district served will benefit greatly through the irrigation schemes now under way, and the earnings of this extension are likely to show a large increase. The Buenos Ayres Great Southern Ry. is an old line, dating its existence back to 1862 when it took over the uncompleted Buenos Ayres State Line. It has paid dividends for a number of years; the rate paid on the Ordinary Stock having been 7% since the late nineties.

Perhaps the widest known line in South America is the Buenos Ayres & Pacific Ry. accounted for by the important part it has played in opening to the world the great Transandine Route from Buenos Ayres, through the heart of the mountains to Valparaiso, Chili. From a small beginning in 1882 it has expanded its mileage and increased its earnings with considerable rapidity and at this writing owns or works under leases, agreements, etc., over 3,500 miles of broad gauge railway, as against about 600 miles operated a dozen years ago.

The Central Argentine Ry. runs through the rich country between Buenos Ayres, Rosario, Cordoba, etc. Its total Gross Earnings and its receipts per mile of road are the largest in the Republic.

Argentina is second in size among the Republics of South America. Its area, 1,139,979 square miles, equals one-third the area of the United States, and it has a population estimated at 7,100,000. It now stands seventh among the nations of the world in the production of wheat, fourth in the area of wheat sown, and has for several years ranked either first or second in the amount exported to other countries. The wheat production for 1912 totalled 198,000,000 bushels, of which about 100,000,000 bushels were exported. The area under cultivation, estimated at 17,100,000 acres, was said to have been not more than one-fifth of the possible area available for the growing of this product. The farms of the nation further produced in 1912, 296,000,000 bushels of maize, and vast quantities of linseed, oats, etc. The raising of domestic animals is another great industry. A recent census shows that within the Republic there are over 29,000,000 head of cattle, 73,000,000 sheep, 7,500,000 horses, 800,000 mules and asses, 4,000,000 goats, etc., valued at about \$700,000,000.

On June 30, 1913, the Banks of the Capital had Cash on Hand, including the balances corresponding to the Argentine Nation, to the amount of \$72,-

AND CENTRAL AMERICA

093,387 gold and \$491,553,755 paper. The balance of Gold in the Conversion Office at the same time amounted to \$266,534,330 as against \$213,866,098 on June 30, 1912.

The imports of the Republic for the year ending June 30, 1913, amounted to £81,480,941 (about \$400,000,000) and the exports to £104,912,799 (about \$500,000,000). The Immigration for the period was 349,364 (including 146,507 Spaniards and 101,300 Italians) and the Emigration 143,618, leaving a balance of 205,746 in favor of the Country.

Argentine Ry.

The Argentine Ry. was incorporated in Maine on July 12, 1912, to acquire control of various railroad properties in Argentine and to operate and construct, both through subsidiary companies and directly, extensions in order to establish and complete a connected railway system.

The Charter, which is a very broad one, gives the purposes of said corporation which in brief may be stated as follows:

To construct, purchase, lease, and operate railroads, street railways, and tramways, within the Republic of Argentine, and within the Republics or countries bordering thereon; also to operate telegraph and telephone lines; to construct and operate gasworks, electric light, heat and power plants; to acquire land and to deal in landed property; to promote colonization; to prospect, acquire, operate, dispose of oil lands and oil wells, and to store refined oil, to treat oil, and establish pipe lines; to improve harbors and ports; to erect docks, etc., to mine ores of all kinds and invest in securities of other companies, and to do an engineering and contracting business.

A letter from the company states:

"The provinces of Entre Rios and Corrientes up to the present time have been partially served by both the Entre Rios Ry. and Argentine North Eastern Ry., and if the existing lines and their services are judiciously improved and new lines constructed these provinces can be made most prosperous. Up to a few years ago the Entre Rios Ry. system was only a feeder to river navigation. An extension was then made to the part of Ibicuy and a through service initiated in connection with Buenos Ayres, but the Entre Rios Co's own lines were not improved and nothing was done to shorten routes and quicken service in order that full advantage could be taken of this connection; nevertheless from the time this connection was made two or three years ago the traffic has greatly increased and there is no doubt that when the railway has been improved and brought up to date under modern American railroad practices, the expansion will be much greater.

"The Argentine North Eastern Ry. (which see) is a natural extension of the Entre Rios. These companies up to the present have been worked independently, and though efforts have been made from time to time to harmonize their interests, no practical measures have been introduced, but on the contrary much of their energies and large amounts of money have been spent in competition.

"The Santa Fe Ry. runs from Rosario parallel to the Parana River and extend-

THE RAILWAYS OF SOUTH'

ing towards Ascusion. It earns at the present time about 10% on its stock and controls a large volume of traffic which is capable of large growth.

"The Central Cordoba Lines are being taken over under a working agreement and by this connection the Argentine Railway Company finds an entrance into Buenos Ayres city and port. The Cordoba Central has very fine terminals in Buenos Ayres with access to the docks. Terminal space in Buenos Ayres at the present time is as expensive as any place in the world and it would cost at least \$15,000,000 to get equal terminal facilities as those now acquired with the Cordoba Central.

"The Argentine Ry. has also secured a concession called the Fary Concession which is for a line running west of the Santa Fe Ry., but at a sufficient distance to create traffic of its own, without interfering with that of the Santa Fe. This line, when constructed, will open up the Argentine Chaco and Paraguayan Chaco, the undeveloped lands of which are both at the present time commanding high prices. These lands are most fertile and can be subjected to the highest cultivation.

"The Argentine Ry. has secured a portion of the Rosario and Puerto Belgrano Ry. with an option for six years to purchase same. The Rosario and Puerto Belgrano Ry. runs from Rosario down to Puerto Belgrano on the Atlantic Ocean, cutting transversely practically all of the railroads in the Argentine Republic and having junctions with them.

"The acquisition of lands in the zones which will be developed by the railways is a feature which has not been overlooked. Large tracts have been purchased at undeveloped prices and are a sure source of profit. Not only will the sale or working of the lands yield a large profit, but their produce will bring a large volume of traffic to the railways.

"The lines also penetrate zones covered with forests of quebracho, of which large areas have been purchased. This industry is one of the most profitable and will yield a large traffic to the railways the year round."

The amount of authorized capital stock is \$30,000,000 Common and \$15,000,000 Preferred.

No statement of earnings is given owing to the recent organization of the company. For the same reason the appended Balance Sheet can only be given in skeleton form.

Statement of the Argentine Railway, August 31, 1912 (latest obtainable):

Assets	
Cash.....	\$1,584,053. 31
Shares and controlling interest in other Companies, and contracts acquired.....	45,476,492. 61
	<u>\$47,060,545. 92</u>
Liabilities	
Common Stock.....	\$30,000,000. 00
Preferred Stock.....	15,000,000. 00
Creditors and Bills Payable.....	2,060,545. 92
	<u>\$47,060,545. 92</u>

AND CENTRAL AMERICA

The interests controlling the Argentine Ry. are identified with those in control of the Brazil Ry., Bolivia Land and Colonization Co., Uruguay Ry., Antofagasta (Chili) and Bolivia Ry., etc.

In January, 1913, the Argentine Ry. sold \$7,500,000 (£1,500,000) two-year Notes secured by £108,423 First Preference Stock, £236,929 Second Preference Stock and £1,166,812 Ordinary Stock of the Entre Rios Rys.; £483,400 Ordinary Stock of the Argentine North Eastern Ry., and about \$3,059,600 of a total of about \$10,800,000 stock of the Santa Fe Ry.

Gross Earnings of the Argentine Ry. lines directly operated (1916 miles) for the period July 1, 1913 to February 21, 1914, were £1,815,860 as against £1,599,085 for the same period in 1912-13. Gross Earnings for a similar period for the lines in which the company held an important interest (1836 miles) were £1,022,430 as against £1,002,723 in 1912-13.

Argentine Great Western Ry.

This railway operates about 950 miles of broad gauge railway extending from Villa Mercedes, westward to San Luis and Mendoza, thence northward to San Juan, with branches. A portion of the line forms the connecting line between the Buenos Ayres & Pacific Ry. (which see) and the Argentine Transandine Ry., thus it is a part of the Trans-continental line between Buenos Ayres and Chili.

In 1907, the Buenos Ayres & Pacific Ry. took over the operation of this line working the same under lease. Under the agreement the Great Western 5% Cumulative Preferred Stock shares pro rata with the 5% First Preference Stock of the B. A. & P. Ry. in all dividends up to 5%, and will share pro rata with the Ordinary Stock of the B. A. & P. Ry. in dividends between 5% and 6% on that class of stock. When the dividend on the B. A. & P. Ry. Ordinary Stock is in excess of 7%, the rate on "Great Western" Preferred Stock will be 6½% and when the rate paid on the B. A. & P. Ordinary Stock exceeds 10%, it will be increased to 7%.

The Ordinary Stock of the Argentine Great Western Ry. shares equally with the B. A. & P. Ry. Second Preference Stock up to 5% and is entitled to additional dividends under similar conditions as the Preference Stock above.

Both the Preferred and the Ordinary Stocks of the "Great Western" received 5% in 1912-13, and also in 1911-12, 1910-11, 1909-10 and 1908-09. For some years prior to 1908-09 the rate on the stocks was 6% per annum.

The interest on all Debenture Stocks are guaranteed by the B. A. & P. Ry.

The Debenture Stock and Capital Stock outstanding June 30, 1913:

	Rate	Amount Issued	
First Debenture Stock.....	4%	£1,700,000	\$8,500,000
Second Debenture Stock.....	4%	1,700,000	8,500,000
Debenture Stock.....	5%	3,600,000	18,000,000
Preferred Stock (Cumulative).....	5%, etc.	2,125,000	10,625,000
Ordinary Stock.....		2,125,000	10,625,000
Total Outstanding.....		£11,250,000	\$56,250,000

THE RAILWAYS OF SOUTH

There is authorized in addition to the above 5% Debenture Stock at £4,000 (\$20,000) per mile of road built and £1,000,000 (\$5,000,000) Shares of £10 each; convertible into equal amounts of Preferred and Ordinary Stocks.

The Gross Earnings of the "Gt. Western" for four years have been as follows:

1909-10.....	\$5,015,395	£1,003,079
1910-11.....	5,370,460	1,074,092
1911-12.....	5,927,285	1,185,457
1912-13.....	6,420,250	1,284,050

The Amounts received from the B. A. & P. Ry. in 1912-13 were \$1,580,000 (£316,000) for interest on Debenture Stock and \$1,062,500 (£212,500) for dividends on the Preferred and Ordinary Stocks.

See Buenos Ayres & Pacific Ry.

Argentine North Eastern Ry.

Year	Avg. Miles Oper.	Gross	Year	Avg. Miles Oper.	Gross
1909-10	560	\$1,227,668	1911-12	665	\$1,596,592
1910-11	614	1,465,117	1912-13	665	1,835,123

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Common.....	\$13,842,500	Debentures (5%).....	\$15,961,143

Styled "A" "B" and "C" Debentures and Debenture Stock, £1,200,000, £992,229 and £1,000,000 respectively of these Debentures were outstanding June 30, 1913, including £203,886 "A" Debentures and Debenture Stock issued during 1912-13. The "C" Debentures and Debenture Stock are entitled to interest at 5 % per annum if earned.

Capitalization		Total	Per Mile
Stock.....	£2,768,500	\$13,842,500	\$20,816
Debentures.....	3,192,229	15,961,143	24,002
Total.....	5,960,729	29,803,643	44,818

Fixed charges below include \$250,000 interest on \$5,000,000 "C" Debentures and "C" Debenture Stock, payable if earned.

Income Account Year Ending June 30, 1913			
Average miles operated, 665.			
	Total		Per Mile
Operating Revenues.....	£367,025	\$1,835,123	\$2,760
Operating Expenses.....	222,226	1,111,130	1,671
Net Operating Revenues.....	144,799	723,993	1,089
Other Income.....	28,352	141,764	213
Total Net Income.....	173,151	865,757	1,302
Fixed Charges.....	154,921	774,606	1,165
*Surplus.....	18,230	91,151	137

Operating Expenses		
Maintenance of Way.....	\$49,302	\$246,513
Maintenance of Equipment.....	28,346	141,730
Traffic and Transportation Expenses.....	114,068	570,338
General Expenses.....	30,510	125,549

Ratio of Operating Expenses to Operating Revenues, 60.5 per cent.

*This Surplus before deducting \$100,000 appropriated to Renewal Fund.

Other Income above includes \$100,540 transferred from Subvention Account.

Appropriation of Gross Income		
	1912-13	1911-12
For Maintenance Expenses.....	19.7 %	20.2 %
For Traffic, Transportation and General Expenses.....	36.6 %	39.4 %
For Fixed Charges.....	39.1 %	40.6 %
For Surplus.....	4.6 %	Deficit
	100.0 %	

AND CENTRAL AMERICA

NOTES

This company's lines extends from Concordia in the province of Entre Rios (where connection is made with Entre Rios Rys.) to Corrientes, capital of the province of that name, and to Posadas. At the latter point a car ferry service has been established affording a connection with the Paraguay Central Ry. operating in the Republic of Paraguay. In October, 1913, through passenger train service via this railway, the Entre Rios Ry. and the Paraguay Central Ry. was placed in operation between Buenos Ayres and Asuncion, the capital of Paraguay. An extension southward from Concordia to Concepcion del Uruguay (about 84 miles) was practically completed June 30, 1913, and a large additional mileage is under construction or is projected, including a line to Puerto Aguirre near the Brazilian frontier.

No dividends are paid on the ordinary stock of this company.

In December, 1911, £1,000,000 5% "C" Defenture stock was authorized and was sold at 85, the proceeds to be used to complete extensions then under construction. In 1912-13, £203,886 "A" Debenture stock was sold.

In 1912-13 The Argentine North Eastern Ry. received from the Government 4% bonds as follows: £21,823, balance due in respect of Posados Extension, and £46,100 on account of subvention Southern Extension. £20,108 from Subvention Account was credited to the Income Account of the company in 1912-13, this being the equivalent of interest on part of the capital expended on the Uruguay extensions. The total expenditures for 1912-13 for construction of new lines, for betterments, equipments, etc., amounted to \$2,487,580 (£497,516), as against £327,497 so expended in 1911-12 and £315,157 so expended in 1910-11. On June 30, 1913, £146,866 Argentine Government 4% bonds were either owned by or due the railway. £67,400 of these bonds were sold by the railway in 1912-13 for £53,659.

The Argentine Ry. has an interest in the stock of this company.

Argentine Transandine Ry.

The Argentine Transandine Ry. forms part of the recently completed Trans-Continental line (the only one in South America) comprising the Buenos Ayres & Pacific Ry., the Argentine Great Western Ry., the Argentine Transandine Ry., Chilian Transandine Ry. and Chilian Rys. The Argentine Transandine Ry. extends from the City of Mendoza, which is the terminal of the Argentine Great Western Ry., via Puente del Inca, etc., to Las Cuevas where it joins the Chilian Transandine Ry. Here a great tunnel (completed in 1910) has been cut through the Andes and the passenger making a trip across the continent no longer finds it necessary to take the ride over the divide formerly separating the railways of the two republics. The railway is about 112 miles in length and is of metre gauge.

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The capitalization June 30, 1913, was approximately as follows:

4% "A" Debenture Stock (guaranteed principal and interest by the B. A. & P. Ry. and Argentine Great Western Ry).....	\$1,550,830	£310,166
4% (formerly 6%) "B" Debenture Stock, interest dependable upon income. Redeemable at par. (Interest has been paid regularly.).....	1,550,830	310,166
7% Preferred Stock (cumulative since 1906). Shares pro rata with Deferred in all dividends above 7% per annum. 3% each was paid in 1910-11 and 1912-13 on account of arrears of dividends. £230,000 back dividends were due June 30, 1913.....	2,500,000	500,000
7% Deferred Stock.....	1,750,000	350,000
	<u>\$7,351,660</u>	<u>£1,470,332</u>

The Income Account for 1912-13 follows:

Received from B. A. & P. Ry. under agreement.....	\$161,565	£32,313
Interest on Recession Bonds.....	22,525	4,505
Total Receipts.....	<u>\$183,090</u>	<u>£36,818</u>
Expenses including £24,814 interest on "A" and "B" Debentures, £4,093 Directors' Fees, etc.....	<u>\$144,535</u>	<u>£28,907</u>
Net Profit.....	\$39,555	£7,911
Add amount brought forward.....	120,730	24,146
Total.....	<u>\$160,285</u>	<u>£32,057</u>
Dividends paid on preferred stock.....	75,000	15,000
Carried forward.....	<u>\$85,285</u>	<u>£17,057</u>

The Rentals received for 1911-12 were \$207,905 (£41,581); \$28,075 (£5,615) interest on Recession bonds was also received. The total profits for the year were \$94,470 (£18,894), not including \$29,600 (£5,920) brought forward from 1910-11.

Argentine Union Ry.

NOTES.

This company was incorporated February 25, 1910, to build a railway from the Port of St. Nicholas to Arenales. The authorized capital is £200,000 (par £1) practically all of which has been subscribed for. Approximately £304,160 (\$1,520,800) of an authorized issue of £1,100,000 (\$5,500,000). First Debenture bonds (£20 denomination). Construction work has been going on for some time and the completion of the line is expected before the end of 1914.

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Bahia Blanca & North Western Ry.

This railway is operated by the Buenos Ayres & Pacific Ry. under an agreement whereby the latter guarantees the principal and interest on the Debenture Capital and dividends on the Stocks. The dividends guaranteed on the Ordinary Stock were at the rate of 3% from 1904 (July) to 1908; 3½%, 1909 to 1912; 4%, 1913 (July) to 1916; 4½% thereafter.

£1,350,000 (\$6,750,000) of this Guaranteed Stock was outstanding June 30, 1913, together with £1,250,000 (\$6,250,000) and £2,000,000 (\$10,000,000) 4½% and 5% Guaranteed Stock since issued. The Bahia Blanca & North Western Ry. had also outstanding at that time £2,450,000 (\$12,250,000) 4% First Debenture Stock and £3,000,000 (\$15,000,000) 4½% Second Debenture Stock. £2,000,000 additional 5% Debentures are authorized. After March 1, 1916, the dividends on the 5% Guaranteed Stock are to be reduced to 4½%.

The amount of Rentals received by this company from the B. A. & P. Ry. in 1912-13 was £436,500 (\$2,182,500) for interest and dividends and £6,320 (\$31,602) for Management Expenses in London and Buenos Ayres.

The traffic of the railway for the last five years (as shown in the annual reports) was as follows:

	Miles Operated	Gross Receipts	
1908-9.....	665	\$3,105,370	£621,074
1909-10.....	701	2,941,275	588,255
1910-11.....	722	2,604,115	520,823
1911-12.....	*782	3,460,625	692,125
1912-13.....	†824	4,180,180	836,036

*Average mileage operated 746; † Average mileage operated 817.

In 1912-13, 1,181,093 passengers were carried and the receipts from that source were £98,632. 964,456 tons of wheat, 217,976 tons of barley, oats, etc., 47,025 tons of wine, 31,233 tons of maize, 790,359 sheep and 136,193 cattle were also handled together with merchandise to the amount of 94,990 tons, etc.

This railway extends from the port of Bahia Blanca northeasterly to Toay and to Nuenco Renanco at which latter point it joins the Buenos Ayres & Pacific Ry., together with various branch lines. The growing importance of the port of Bahia Blanca is shown by the fact that during the period from January 1 to September 25, 1913, the exports of wheat and oats were as follows:

	Wheat (tons)	Oats (tons)
Bahia Blanca.....	876,782	401,830
Buenos Ayres.....	436,288	233,756
La Plata.....	317,484	167,715
Rosario.....	741,497	10,124
Santa Fe.....	262,595	84
Other Ports.....	40,062	215

753,667 tons of cereal were shipped at this company's port at Bahia (Puerto Galvin) in 1912-13.

The company has been engaged in building a line southward to Patagonas

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on the Rio Negro River. The line has been completed as far as Vallarino on the Colorado River (63½ miles). The total length of the line will be about 167 miles. \$1,244,875 (£248,975) were expended on this extension during 1912-13.

Buenos Ayres & Pacific Ry.

Year	Avg. Miles Oper.	Gross	Surplus	Year	Avg. Miles Oper.	Gross	Surplus
1910-11	3,114	\$24,104,207	\$3,558,672	1912-13	3,404	\$27,953,066	\$3,579,503
1911-12	3,240	24,883,255	†2,145,315				

*Total June 30, 1913, 3,417 miles; 1,407 miles owned, 2,010 leased.

†A strike in 1911-12 caused a loss in Surplus of over \$900,000.

*Stock Outstanding June 30, 1913			*Bonds Outstanding June 30, 1913		
Ordinary.....		\$50,000,000	Deb. Stock (4%).....		\$14,625,000
†Preference 1st (5%).....		6,000,000	†Deb. Stock (4½%).....		50,088,365
Preference 2d (5%).....		5,000,000	Deb. Stock (5%).....		10,000,000

*These are the Stocks and Debenture Stocks of the parent company and do not include Securities of leased and controlled Lines. †Cumulative. ‡\$1,536,855 (£307,327) paid off June 30, 1913; includes \$10,375,000 (£2,075,000) Second Debenture Stock and \$39,713,365 (£7,942,673) Consolidated Debenture Stock.

Capitalization			
	Total		Per Mile
Stock.....	£12,200,000	\$61,000,000	\$17,920
Debenture Stock.....	15,250,000	74,713,365	21,949
Total.....	27,450,000	135,713,365	39,869

Fixed Charges below include \$4,657,421 for Rentals payable under agreements, guaranteed dividends, etc. (see Notes), \$46,334 Depreciation of Steamers and \$53,276 Income Tax.

Income Account Year Ending June 30, 1913

Average miles operated, 3,404.

	Total	Per Mile
Gross Receipts.....	\$5,590,613	\$27,953,066
Operating Expenses.....	3,459,921	17,299,608
Net Receipts.....	2,130,692	10,653,458
Other Income.....	183,110	915,550
Total Net Income.....	2,313,802	11,569,008
Fixed Charges.....	1,597,901	7,989,505
Surplus.....	715,901	3,579,503

Operating Expenses		
	Total	Per Mile
Maintenance of Way.....	£447,929	\$2,239,647
Maintenance of Equipment.....	614,617	3,073,084
Traffic and Transportation Expenses.....	1,953,865	9,769,328
General Expenses.....	443,510	2,217,549

Ratio of Operating Expenses to Gross Receipts, 61.9 per cent.

Appropriation of Gross Income

	1912-13	1911-12
For Maintenance Expenses.....	18.4%	19.0%
For Traffic, Transportation and General Expenses.....	41.5%	42.7%
For Fixed Charges.....	27.7%	29.9%
For Surplus.....	12.4%	8.4%
	100.0%	100.0%

	1912-13	1911-12	1910-11
Miles, second and additional main track.....	294	267	246
Miles, yards and sidings.....	673	649	568

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NOTES.

The First Preference Stock and the Second Preference Stock are entitled to receive dividends of 5% each in order of priority. The dividend on the First Preference stock is cumulative. Full dividends were paid on these two classes of stock in 1912-13; also 3% was paid on the ordinary stock, as against 2% paid in 1911-12, 3½% in 1910-11, 3% in 1909-10, 5% in 1908-9, and 7% in 1907-8.

There was a strike of drivers and firemen during the year 1911-12 which caused a loss in Net Revenues estimated at from \$900,000 to \$1,000,000.

The 4% First Debenture Stock (£2,925,000 authorized and outstanding) and the 5% Second Debenture Stock (£2,075,000 authorized and outstanding) are a first and second charge on the property of this company. The latter class of stock is redeemable at 105 at the company's option. £307,327 5% Debenture Stock (issued prior to February, 1907), £7,942,673 4½% Consolidated Debenture Stock and £2,000,000 5% Debenture Stock (issued 1912 and 1913) were also outstanding on June 30, 1913, being charges on the property in the order of priority. The £307,327 5% Debenture Stock was called for payment July 1, 1913. This was a part of an issue of £1,250,000, the balance of which (£942,673) was exchanged for an equal amount of 4½% Consolidated Debenture Stock.

The company's balance sheet as of June 30, 1913, showed a considerable balance of Working Assets over Working Liabilities. Among the Working Assets was cash to the amount of £671,794, £266,309 (net) Bills Receivable and £1,857,193 stores. There were also Reserve Funds to the amount of £671,264.

This company leases the Argentine Great Western Ry. (which see) and paid as rental in 1912-13, £316,000 for interest on the latter's £7,000,000 Debenture Stocks, and £212,500 as dividends on the £2,125,000 Preferred Stock and £2,125,000 Ordinary Stock of the latter. The Bahia Blanca & Northwestern Ry. (see that company) is also operated under agreement. £436,500 was paid as rental for this line in 1912-13, which amount was applied as dividends on the latter's stock. The sums of £40,721 and £32,013 were paid in 1912-13 to the Villa Maria & Rufino Ry. and to the Argentine Transandine Ry. as rentals, the former amount as a dividend and the latter as a proportion of receipts. These latter companies are described under separate heads.

The Bahia Blanca & North Western Ry. which, as stated above, is operated by the Buenos Ayres & Pacific Ry. under a working agreement, earned in 1912-13 gross, \$4,180,180 (£836,036). The company operated June 30, 1913, 824 miles of road, and had outstanding on that date Debenture Stock and Guaranteed Stock to the amount of £10,050,000.

The lines of this company and of the companies leased by it, extend from Buenos Ayres on the east to the Andes Mountains. Here connection is made with the Chilian Transandine Ry. which in turn connects with the Chilian (Government) Rys. these lines forming a Transcontinental system from the Atlantic Ocean at Buenos Ayres to the Pacific Ocean at Valparaiso. A large number of extensions and branches have been constructed by the B. A. & P. Ry. during recent years.

Wheat and other Cereals, Wine and Grapes and Live Stock constitute the principal tonnage hauled by this railway system. In 1912-13 a total of 11,601,148 passengers were carried (average 31,784 per day—128 per train).

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The tonnage and earnings from the handling of cereals were as follows:

	1912-13		1911-12	
	Tons	Receipts	Tons	Receipts
Wheat.....	1,474,631	£579,364	1,290,547	£498,742
Maize.....	545,048	237,219	154,750	71,355
Barley, Oats, etc.....	263,803	48,580	230,133	45,055
Linseed.....	100,198	70,369	75,120	52,751
Total.....	2,383,680	£935,532	1,750,550	£667,883

Vine Products contributed the following:

	1912-13		1911-12	
	Tons	Receipts	Tons	Receipts
Wine.....	460,114	£997,332	441,585	£949,521
Grapes.....	59,549	87,196	43,854	62,497
Raisins.....	1,366	3,917	1,464	3,444
Total.....	521,029	£1,088,445	486,903	£1,015,462

The total of £338,837 was received in 1912-13 from the handling of 2,655,205 head of live stock and £747,031 from the traffic in General Goods.

Buenos Ayres Central Ry.

Year	Average Miles Operated	Gross	Surplus
1912-13	175	\$1,300,645	\$274,478
Stock Outstanding		Bonds Outstanding	
June 30, 1913		June 30, 1913	
*Common.....	\$8,469,300	†Fixed Interest.....	\$6,500,000
*\$20,165,000 Argentine Currency. †£700,000 4½% First Mortgage Debentures and £600,000 Second Mortgage Debentures.			

Capitalization

	Total	Per Mile
Stock.....	\$8,469,300	\$48,396
Bonds.....	6,500,000	37,143
Total.....	14,969,300	85,539

Income Account Year Ending June 30, 1913

Average miles operated, 175.	Total	Per Mile
Gross Receipts.....	£260,129	\$1,300,645
Operating Expenses.....	146,736	783,681
Net Receipts.....	113,393	566,964
Total Net Income.....	113,393	566,964
Fixed Charges.....	58,498	292,491
*Surplus.....	54,895	274,478

Operating Expenses

	Total	Per Mile
Maintenance of Way.....	£24,368	\$121,842
Maintenance of Equipment.....	10,173	50,864
Traffic, Transportation and General Expenses.....	112,195	560,975

Ratio of Operating Expenses to Gross Receipts, 56.4 per cent.

*This Surplus before deducting \$14,522 appropriated to Reserve.

Appropriation of Gross Income

	1912-13
For Maintenance Expenses.....	13.3%
For Traffic, Transportation and General Expenses.....	43.1%
For Fixed Charges.....	22.5%
For Surplus.....	21.1%
	100.0%

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NOTES

This company, the stock of which is almost wholly owned in Argentine, operates about 175 miles of road. The main line extends from Buenos Ayres in a westerly direction to Rojas and there is a branch to Zarate on the Panama River. From Zarate a car ferry connects with the Entre Rios Rys. and through trains are operated via these lines, the Argentine Northeastern Ry. and the Paraguay Central Ry., to Asuncion, the capital of Paraguay. A part of the line is double tracked.

3% was paid on the stock in 1912-13, against 1½% each in 1911-12 and 1910-11.

The 4½% First Mortgage Debentures are authorized to the amount of £1,000,000, of which a total of £700,000 had been issued to June 30, 1913. They are redeemable at par in 1950, or after January, 1917, at option of the company, but only upon six months notice.

The 5% Second Mortgage Debentures have been issued to the entire authorized amount, £600,000. The Debentures may be drawn at par by lot or may be purchased through a Sinking Fund at par or less.

A part of the line will be used by the Lacroze Tramways Co. operating high speed electric trains between Buenos Ayres and Campo de Mayo, which will net the Buenos Ayres Central Ry. \$375,000 (£75,000) per annum.

This railway owns valuable terminals at Chacarita, near Buenos Ayres, and has trackage rights over the Lacroze Tramways into the city.

Buenos Ayres Midland Ry.

The Buenos Ayres Midland Ry. is operated jointly by the Buenos Ayres Great Southern Ry. and the Buenos Ayres Western Ry. under an agreement whereby from January 1, 1914, to June 30, 1916, there will be advanced by the two lessee companies an amount sufficient to pay 3% per annum on both the preference and ordinary stocks. After June 30, 1916, the guaranteed dividends will be at the rate of 4% per annum. Prior to January 1, 1914, the Buenos Ayres Midland Ry. received a percentage of its Gross Receipts; 43.28%, or \$303,442 (£60,688) in 1912-13; \$157,778 (£31,556) in 1911-12.

This company has outstanding \$7,795,050 (£1,559,010) 4% Debenture Stock, \$5,000,000 (£1,000,000) 5% non-cumulative preference stock (par £1) and \$2,500,000 (£500,000) ordinary stock. Prior to January 1, 1914, no dividend had been paid on either preference or ordinary stock, and the balance sheet as of June 30, 1913, showed that there was due for advances and accrued interest \$2,305,156 (£461,031) of which £275,872 was due the B. A. Gt. S. Ry. and £185,159 was due to the B. A. W. Ry.

The Net Revenue Account of the Buenos Ayres Midland Ry. for 1912-13 showed the following results:

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Gross Receipts.....	£140,213	\$701,064
Working Allowance.....	79,524	397,622
Net Receipts.....	60,688	303,442
Other Income.....	1,855	9,274
Total Income.....	62,543	312,716
Interest, etc.....	70,145	350,725
Loss for year.....	7,602	38,009

This railway extends from a suburb of Buenos Ayres southwesterly to Carhue where connections are made with the Buenos Ayres Great Southern Ry. and Buenos Ayres Western Ry. The total length of the line is 322 miles.

Previous to the leasing of the company a large amount of its common stock had been held by the two companies leasing the property.

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Buenos Ayres Great Southern Ry., Ltd.

Year	Avg. Miles Oper.	Gross	Year	Avg. Miles Oper.	Gross
1903-4	2,471	\$14,265,030	1908-9	2,716	\$23,241,495
1904-5	2,481	16,750,510	1909-10	2,770	23,009,620
1905-6	2,506	19,484,400	1910-11	3,044	24,941,900
1906-7	2,613	21,270,045	1911-12	3,380	27,020,479
1907-8	2,613	22,211,880	1912-13	*3,544	32,846,724

*Total mileage operated June 30, 1913, 3,582 miles.

Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913		
Ordinary.....	\$117,500,000		Deb. Stock (4 %)	\$66,381,760	
*Extension Shares (4 %)....	15,000,000		Deb. Stock (4 ½ %)	5,164,650	
Preference Stock (5 %)....	40,000,000		Brandzen Branch Annuity (4 ½ %)	1,213,000	

*Convertible into ordinary stock at par June 30, 1913. A portion of the dividend for 1912-13 on these shares was charged to Construction Account. \$13,250,000 (£2,650,000) additional Extension Shares have been issued to stockholders (final payment due January 1, 1914). These shares are convertible into ordinary stock after June 30, 1914.

†Issued to Buenos Ayres Western Ry. to purchase Saladillo Branch.

‡Issued to Buenos Ayres Western Ry. to purchase Brandzen Branch.

Capitalization			
	Total		Per Mile
Stock.....	£34,500,000	\$172,500,000	\$48,674
Debenture Stock.....	14,551,882	72,759,410	20,530
Total.....	49,051,882	245,259,410	69,204

Fixed Charges below include \$768,288 for rentals, including \$232,409 interest on 4 ½ % Debenture Stock issued to purchase Saladillo Branch and \$54,585 annuity account of Brandzen Branch.

Income Account Year Ending June 30, 1913

Average miles operated, 3,544.

	Total	Per Mile
Operating Revenues.....	£6,569,345	\$32,846,724
Operating Expenses.....	3,698,996	18,494,979
Net Operating Revenues.....	2,870,349	14,351,745
Other Income.....	151,089	755,447
Total Net Income.....	3,021,438	15,107,192
Fixed Charges.....	716,085	3,580,424
Surplus.....	2,305,353	11,526,768

Operating Expenses

Maintenance of Way.....	£740,206	\$3,701,032	\$1,045
Maintenance of Equipment.....	543,103	2,715,516	766
Traffic and Transportation Expenses.....	1,848,211	9,241,054	2,607
*General Expenses.....	567,476	2,837,377	801

Ratio of Operating Expenses to Operating Revenues, 56.3 per cent.

*Includes expenses of Wharves, Elevators, Restaurants, etc.; also \$391,451 (£78,290) 3 % Tax, payable under Mitre Law.

Other income above includes \$499,977 interest on Investments in Allied companies.

Appropriation of Gross Income		
	1912-13	1911-12
For Maintenance Expenses.....	19.1 %	17.5 %
For Traffic, Transportation and General Expenses.....	35.9 %	37.2 %
For Fixed Charges.....	10.7 %	12.4 %
For Surplus.....	34.3 %	32.9 %
	100.0 %	100.0 %

Ton miles per mile of road.....	1912-13	1911-12
Passenger miles per mile of road.....	*236,208	*175,685
	146,163	131,345

*Exclusive of tonnage of live stock.

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NOTES

The lines of this company extend from Buenos Ayres (where extensive and valuable terminals are owned) in a southerly and southwesterly direction, through the province of Buenos Ayres, converging at Bahia Blanca. Practically all of the important points in the eastern, central and southern parts of the province of Buenos Ayres are reached. From Bahia Blanca a line runs in a westerly direction to Senillosa from which latter point it is being extended to Pino Hachado Pass on the boundary line with Chili (nearly 200 miles). Branch lines are to be constructed from Rio Colorado and Darwin on the western extension of the main line through the province of Rio Negro to Port San Antonio on the Gulf of San Matias. At Port San Antonio a connection will be afforded with the Patagonia Ry., which the Government is constructing. A large portion of the mileage is double-tracked, while in the vicinity of Buenos Ayres the line has four tracks. The extensions of the Buenos Ayres Great Southern Ry. authorized June 30, 1912, totalled 636 miles; 97 miles of line were completed during 1912-13.

During 1912-13 the sum of £2,319,889 (net) was expended for extensions, additions and betterments and for new equipment. These expenditures were charged to Capital.

£13,276,352 4% Debenture Stock outstanding June 30, 1913, is part of an authorized issue of £15,750,000. The £1,032,930 and £242,600 4½% Debenture Stock was issued to the Buenos Ayres Western Ry. in payment of the Saladillo Branch and of the Brandzen Branch.

The £3,000,000 4% Extension Shares outstanding June 30, 1913, will be convertible into ordinary stock at par on June 30, 1914, together with £2,650,000 Extension Shares, the final payment on which fell due January 1, 1914. The Ordinary Stock has received dividends of 7% per annum since prior to the year 1900.

The gauge of this road is 5 feet 6 inches. A similar gauge is used by most of the railway lines in the Republic of Argentine. The rail used in the main track is largely 85 to 100 pounds in weight.

As of June 30, 1913, the company had on hand stores and supplies to the amount of £2,141,035 and a large amount of current assets. Funds for General Reserve, Insurance, etc., were on hand to the amount of £1,331,819.

See Buenos Ayres Midland Ry. regarding lease of that company by the Buenos Ayres Great Southern Ry. and Buenos Ayres Western Ry.

This company operates, under a working agreement, the line of the Buenos Ayres, Euseñada & South Coast Ry., which operates between Elizalde (near La Plata) to Purenita Rieles, Magdalena and Atalaya, and which is to build a 71½ mile branch in a southerly direction to Lezama. About 43½ miles of this extension is under construction.

The Buenos Ayres Great Southern Ry. is constructing in the Rio Negro Valley, extensive Irrigation Works, which will greatly aid in the development of this thinly settled section of country.

During 1912-13 there were handled a total of 27,454,719 passengers, an increase of 3,847,450. The principal freight traffic included the following:

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	Total	Receipts
Live Stock	6,562,931	£454,285
Wheat (tons)	1,744,572	501,674
Maize (tons)	997,182	246,611
Oats (tons)	836,856	360,009
Stone and Lime (tons)	921,803	303,139
General Goods (tons)	2,531,595	1,331,852

Buenos Ayres Western Ry.

Year	Total Miles Oper.	Gross	Year	Total Miles Oper.	Gross	Surplus
1907-8	1,219	\$11,026,185	1910-11	1,586	\$13,170,932	\$5,567,169
1908-9	1,305	11,484,300	1911-12	1,659	12,128,413	4,617,751
1909-10	1,365	11,502,550	1912-13	1,781	14,530,040	6,369,425

*Stock Outstanding June 30, 1913

†Ordinary	\$58,738,300
Extension (4%)	28,000,000
Preference (5%)	1,500,000
Preference (4½%)	12,761,700

Bonds Outstanding June 30, 1913

†Gov't Bonds	\$5,000,000
Debenture Stock (4%)	30,533,330

*Ordinary, £11,747,660; 4% Extension Shares (converted into Ordinary Shares July 1, 1913) £2,000,000; 4% Extension Shares, convertible into Ordinary Shares in 1915, £3,600,000; Preference Shares (5%), £300,000; Preference Shares (4½%), £2,552,340.

†\$10,000,000 additional Ordinary Stock issued in exchange for a like amount of Extension Shares July, 1913. †Government Loan of 1888.

Capitalization

	Total	Per Mile
Stock	£20,200,000	\$101,000,000
Bonds	7,106,666	35,533,330
Total	27,306,666	136,533,330
		76,661

Fixed Charges below include \$236,001 (£47,200) paid to the B. A. Midland Ry. as rental under Working Agreement, and \$26,883 Income Tax.

Income Account Year Ending June 30, 1913

Total miles operated, 1,781.

	Total	Per Mile
Gross Receipts	£2,906,008	\$14,530,040
Operating Expenses	1,659,515	8,297,574
Net Receipts	1,246,493	6,232,466
Other Income	374,890	1,874,451
Total Net Income	1,621,383	8,106,917
Fixed Charges	347,498	1,737,492
*Surplus	1,273,885	6,369,425
		3,576

Operating Expenses

Maintenance of Way	£342,998	\$1,714,984	\$963
Maintenance of Equipment	282,691	1,413,456	794
Traffic and Transportation Expenses	841,736	4,208,682	2,363
*General Expenses	192,090	960,452	539

Ratio of Operating Expenses to Gross Receipts, 57.1 per cent.

*Contains certain expenditures usually included in Fixed Charges in the statements of railroads in the United States (\$179,613, Tax of 3% payable under the Mitre Law, etc.)

Other Income above includes \$748,466 (£149,693) from rentals (see Notes).

Appropriation of Gross Income

	1912-13	1911-12
For Maintenance Expenses	19.1%	15.5%
For Traffic, Transportation and General Expenses	31.5%	35.9%
For Fixed Charges	10.6%	13.2%
For Surplus	38.8%	35.4%
	100.0%	100.0%
Ton miles per mile of road	330,536	278,294
Passenger miles per mile of road	115,980	111,619

THE RAILWAYS OF SOUTH

NOTES

The 5% and 4½% Preference Shares are repayable at £11 per £10 share in the event of the company being liquidated or the line sold. The 4% Extension shares of 1913 (£2,000,000) were convertible into Ordinary Stock at par, July 1, 1913. The (£3,600,000) 4% Extension shares of 1915 (issued in 1911-12) are convertible on similar terms in 1915. An issue of £3,400,000 4½% Guaranteed Preference Stock has been authorized. None of this class of stock had been issued to June 30, 1913. Dividends of 7% per annum were paid on the Ordinary Stock from 1902-3 to 1909-10, and in 1911-12 and 1912-13; in 1910-11 7½% was paid.

The line of this company extends westward from Buenos Ayres into the districts of La Pampas and San Luis.

A number of extensions are authorized or are under construction. A portion of the mileage suburban to Buenos Ayres is to be operated by electricity.

An extension from Bagual to Colonia Alvear (122 miles) was opened December 1, 1912.

Live stock (mostly sheep) form one of the Buenos Ayres Western Ry.'s principal sources of traffic. 7,345,845 live stock were handled in 1912-13, also 2,896,015 tons of goods, of which all except 815,136 tons consisted of Products of Agriculture.

A total of 11,462,842 passengers were handled in 1912-13, as against 9,572,758 in 1911-12, and against 3,694,321 in 1905-6.

The company received in 1912-13 £149,693 as rental and as interest on securities received in payment for lines disposed of to other companies as follows: Central Argentine Ry. Northern Branches, £90,787; Buenos Ayres Great Southern Ry., interest on £1,032,930 4½% Debenture stock for the Saladillo Branch, £48,482; same company for Rental Brandzen Branch, £10,917, and B. A. & Pacific Ry. interest in respect of Chacarita Branch, £1,507.

Jointly with the Buenos Ayres Great Southern Ry. this company has acquired the Buenos Ayres Midland Ry., (see that company), Buenos Ayres to Carhue (320 miles). 3% per annum from January 1, 1914, until June 30, 1916, and 4% per annum thereafter has been guaranteed on the preference and ordinary shares of the Midland Ry.

AND CENTRAL AMERICA

Central Argentine Ry.

Year	Avg. Mile Oper.	Gross	Year	Avg. Miles Oper.	Gross
1911-12	2,870	\$26,119,075	1912-13	* 2,994	\$32,446,730
		£5,223,815			£6,489,346

*The total mileage in operation June 30, 1913, was 3,057 miles.

Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913		
*Consolidated Ordinary....	\$139,381,400		†Fixed interest.....	\$64,944,325	
Deferred.....	4,059,000				
Preference (4 1/4%).....	44,827,115				

*Includes \$13,446,650 (£2,689,330) new shares of 1913.

†Includes \$10,087,500 (£2,017,500) perpetual Western Annuity issued to the B. A. Western Ry. in payment for lines acquired.

Capitalization			Per Mile		
	Total				
Stock.....	£37,653,503	\$188,267,515	\$62,882		
Obligations.....	12,988,865	64,944,325	21,691		
Total.....	50,642,368	253,211,840	84,573		

Fixed Charges below include \$453,935 (£90,787) Western Annuity.

Income Account Year Ending June 30, 1913

Average miles operated, 2,994.

	Total	Per Mile
Gross Receipts.....	£6,489,346	\$32,446,730
Operating Expenses.....	3,718,935	18,594,675
Net Receipts.....	2,770,411	13,852,055
Other Income.....	174,001	870,003
Total Net Income.....	2,944,412	14,722,058
Fixed Charges.....	544,703	2,723,514
*Surplus.....	2,399,709	11,998,544

Operating Expenses			Per Mile		
	Total				
Maintenance of Way.....	£616,741	\$3,083,705	\$1,030		
Maintenance of Equipment.....	624,338	3,121,690	1,042		
Traffic and Transportation Expenses.....	2,009,619	10,043,095	3,356		
General Expenses.....	468,237	2,341,185	782		

Ratio of Operating Expenses to Gross Receipts, 57.3 per cent.

*This Surplus before deducting \$1,470,000 (£294,000) transferred to Funds for Renewals, Accidents, Claims, Casualties, General Reserve, etc.

Other Income above includes \$527,810 (£105,562) from Interest during Construction.

Appropriation of Gross Income

	1912-13
For Maintenance Expenses.....	18.6%
For Traffic, Transportation and General Expenses.....	37.2%
For Fixed Charges.....	8.2%
For Surplus.....	36.0%
	100.0%

THE RAILWAYS OF SOUTH

NOTES.

The Preference Stock is entitled to dividends at the rate of $4\frac{1}{2}\%$ per annum in priority to the Consolidated Ordinary Stock and the Deferred Stock. \$44,827,115 (£8,965,423) of this class of stock was outstanding June 30, 1913. The authorized issue of Preference Stock is limited to one-half of the amount of Ordinary and Deferred Stocks issued from time to time.

The Consolidated Ordinary Stock, \$138,381,400 (£27,676,280) of which is outstanding, including \$13,446,650 (£2,689,330) new shares, 1913, is entitled to 5% per annum, after which the Deferred Stock (£811,800 outstanding) receives 5%, then both issues share pro rata in further dividends.

The 4% Debenture Stock, \$50,688,820 (£10,137,764) of which was outstanding June 30, 1913, is a first floating charge on the entire property, subject only to the £2,017,500 annuity issued to the Buenos Ayres Western Ry. in payment for lines acquired, and to £204,814 $3\frac{1}{2}\%$ Central Debenture Stock. The Debenture capital cannot exceed two-thirds the share capital outstanding at any time.

For the years ending June 30, 1911, 1912 and 1913, dividends of 6% per annum were paid on the Consolidated Ordinary Stock and on the Deferred Stock.

The Central Argentine Ry. operates an important system of railways extending from Buenos Ayres and Rosario, to Cordoba, Tucuman, Santa Fe, etc., including two lines between Buenos Ayres and Rosario, one of which is the main line extending to Tucuman. The country served by this railway system is highly productive and is growing rapidly. The Gross Receipts of the company were during 1912-13 the largest of any railway in Argentine Republic, and presumably in South America. During 1912-13, the railway handled 2,746,170 tons of maize and 1,054,689 tons of wheat (total goods handled producing revenue 7,948,964 tons), also 1,908,412 head of live stock (including 1,198,758 cattle). A total of 21,721,273 passengers were also carried in 1912-13.

This railway connects at Tucuman with the Government owned line, the Argentine Northern Central State Ry., which extends to La Guaiaca on the Bolivian frontier, where it will connect with a line of railway to be built from Tupeza, in the latter Republic.

A large suburban mileage is being electrified.

As of September 30, 1913, it was stated, that of new branches and extensions authorized totalling 517 $\frac{1}{2}$ miles, 282 miles were open to traffic, rail had been laid on 442 miles and 490 $\frac{1}{2}$ miles were graded.

The balance sheet as of June 30, 1913, showed an extremely strong financial condition. The amounts of Cash, Securities held for Investment, Stores, etc., greatly exceeded Current Liabilities, and large sums were reserved for Renewals, Insurance, Casualties, etc., etc.

AND CENTRAL AMERICA

There follows a table showing the growth of this System during a period of ten years:

	1902-03	1912-13	Inc. %
Average Miles Operated.....	2,316	2,994	29.3
No. of Passengers Carried.....	7,070,289	21,721,273	207.2
*Tons of Goods Carried.....	3,939,757	9,449,209	139.8
Tons of Live Stock Carried.....	300,932	654,895	117.6
Gross Receipts.....	£2,796,296	£6,489,346	132.1
Net Receipts.....	£1,389,072	£2,770,411	99.4
Train Miles.....	5,042,089	10,314,245	104.6
Accumulated Reserve Funds.....	£643,897	†£2,173,138	237.5

*Includes company freight.

†June 30, 1912; amounts larger on June 30, 1913.

Cordoba Central Ry.

(Amalgamated System.)

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1909-10	1,149	\$6,600,915	1912-13	1,176	\$9,550,265
1910-11	1,170	7,652,955	*1913	1,176	*4,657,125
1911-12	1,172	8,217,215			

*Six months January 1 to June 30, 1913. See Notes regarding merger under date of January 1, 1913, of the Cordoba Central Ry. (Original Line and Central Northern Section), the Cordoba & Rosario Ry. and the Cordoba Central Buenos Ayres Extension Ry.

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
*Ordinary.....	\$20,343,635	Debenture Stock.....	\$56,258,590
1st Preference (5%).....	7,200,000		
†2nd Preference (5%).....	8,309,475		

*\$537,120 of this Stock does not rank for dividend until July 1, 1917.

†\$3,500,000 of this Stock does not rank for dividend until July 1, 1916.

Capitalization		Per Mile
	Total	
Stock.....	£7,170,622	\$35,853,110
Bonds.....	11,251,718	\$56,258,590
Total.....	18,422,340	\$92,111,700

Note.—The Gross Receipts for the year ending June 30, 1913, were \$9,550,265 (£1,910,053), equal to \$8,121 per mile. The Net Receipts were \$2,731,765 (£546,353) equal to \$2,323 per mile.

Income Account Six Months Ending June 30, 1913

(Amalgamated System)

Average miles operated 1,176.		Per Mile
	Total	
Gross Receipts.....	£931,425	\$4,657,125
Operating Expenses.....	640,835	3,204,175
Net Receipts.....	290,590	1,452,950
Other Income.....	61,087	305,435
Total Net Income.....	351,677	1,758,385
Fixed Charges.....	230,627	1,153,135
*Surplus.....	121,050	605,250

Operating Expenses

Maintenance of Way.....	£75,645	\$378,225	\$321
Maintenance of Equipment.....	69,936	349,680	297
Transportation Expenses.....	397,907	1,989,535	1,692
General Expenses.....	97,347	486,735	415

Ratio of Operating Expenses to Gross Receipts 68.8 per cent.

*This surplus before deducting \$57,485 (£11,497) transferred to Renewals Reserve Account.

Other Income above includes \$33,520 (£6,704) from Rental (Net) of Administration Building and \$269,925 (£53,985) amount provisionally agreed as payable by Argentine Ry. to make up guaranteed Net Traffic for the half-year ending June 30, 1913.

THE RAILWAYS OF SOUTH

NOTES.

On January 1, 1913, the Cordoba Central Original Line and Central Northern Section, the Cordoba Central Buenos Ayres Extension Ry. and the Cordoba & Rosario Ry. were amalgamated, and will in future be operated as the Cordoba Central Ry. The new company has authorized and has outstanding the following securities:

	Authorized	Outstanding
Ordinary Income Stock.....	£5,000,000	*£4,068,620
Shares (par £1).....	107	107
5% Cumulative First Preference Income Stock	2,500,000	1,400,000
5% Second Preference Income Stock.....	2,500,000	†1,661,895
4% First Debenture Stock.....	8,000,000	7,730,000
4½% Second Debenture Stock.....	5,000,000	3,521,718
	<u>£23,000,107</u>	<u>†£18,422,340</u>

*£107,424 Ordinary Income Stock does not rank for dividends until July 1, 1917.

†£700,000 Second Preference Income Stock does not rank for dividends until July 1, 1916.

‡£1,767 has been paid off in cash.

For the six months ending June 30, 1913, dividends at the rate of 5% per annum were paid on the First and Second Preference Income Stock, and a dividend of 2½% per annum (1¼% for six months) was paid on the Ordinary Stock.

The Argentine Ry. has acquired control of this System. For the six months ending June 30, 1913, the Cordoba Central Ry. Co. received from the Argentine Ry., as guaranteed, the sum of £53,985, to make up additional net traffic.

This railway system (metre gauge) operates from Buenos Ayres, where a terminal and office building has been erected, through a thickly populated country to Rosario—thence to Cordoba, and northward to La Madrid Tucuman, etc.

The cost of the Buenos Ayres Extension to the date of the merger was shown to be £3,153,118 (\$15,765,590) and the interest paid on the B. A. Extension 5% Debentures under interest guarantee (by Cordoba Central Ry.) was £982,230 (\$4,911,150). The Net Earnings from May 11, 1909, to December 31, 1912, and the rents from the administration building for that period were £244,372 (\$1,221,860). The Capital Expenditure (including a portion of the above) for the year 1912-13, on the entire System, was £473,566 (\$2,367,830).

For the six months ending December 31, 1912, the Cordoba Central Ry. proper including the Original Line and Central Northern Section reported the following earnings:

*Gross Receipts.....	£570,331	\$2,851,655
Working Expenses.....	439,489	2,197,445
Net Receipts.....	<u>£130,842</u>	<u>\$654,210</u>

*£417,538 (\$2,087,690) Central Northern Section; £152,793 (\$763,965) Original Line.

AND CENTRAL AMERICA

For a similar period the Cordoba Central Buenos Ayres Extension Ry. was operated with the following results:

Gross Receipts.....	£191,493	\$957,465
Working Expenses.....	156,077	780,385
Net Receipts.....	£35,416	\$177,080

To the net receipts as above should be added £7,414 (\$37,070), the Net Rental from the Administration Building in Buenos Ayres.

For a similar period during 1911, the Gross Receipts were £109,353 and the Net Receipts £27,782.

The Cordoba & Rosario Ry.'s earnings, July 1 to December 31, 1912, were as follows:

Gross Receipts.....	£216,804	\$1,084,020
Working Expenses.....	127,299	636,495
Net Receipts.....	89,505	\$447,525
Other Income.....	106	530
Total Net.....	89,611	448,055
Fixed Charges, Dividends, etc.....	71,209	356,045
Surplus.....	18,402	92,010

An issue of £700,000 4½% Second Debenture Stock was made in March 1913, to provide additional equipment and improvements; 48 locomotives, 1,350 freight cars and 23 passenger coaches are being provided.

The new works and improvements projected include the laying of a third rail to a point about 64 miles from Buenos Ayres, where a junction will be made with a line to be constructed by the Entre Rios Rys. This connection will provide a route for the Entre Rios main line traffic into the Cordoba Central terminals in the City of Buenos Ayres, and it is anticipated that the latter railway will obtain considerable revenue from that source.

The Amalgamated System in 1912-13 handled 3,837,921 tons of freight and live stock, including 978,774 tons of firewood and coal, 720,679 tons of wheat and other cereals, 578,531 tons of sugar and sugar cane, etc. 157,842 animals were carried during the year.

This company owned on June 30, 1913, 252 locomotives, 405 passenger train cars (including 68 sleeping cars), 5,863 freight train cars and 7 cranes.

Central Ry. of Chubut Co.

This company was incorporated in 1886 to construct a railway in the Province of Chubut, Argentine Republic, extending from Port Madryn, the chief port of Patagonia to Trelaw and Gaiman. The line is 51 miles long, is in good working order, and serves principally a colony of Welsh settlers. At Port Madryn a valuable steel pier (completed 1910) is owned. According to recent reports 12 additional miles of road were under construction.

THE RAILWAYS OF SOUTH

The railway is controlled by the Port Madryn (Argentina) Co., and has paid dividends on its £200,000 stock (par £10) in recent years as follows: 1909-10, 10% (partly out of accumulated profits); 1910-11 and 1911-12, 6% each; 1912-13, 7%.

Entre Rios Rys.

Year	Avg. Miles Oper.	Gross	Year	Avg. Miles Oper.	Gross	Surplus
1907-8	656	\$1,503,435	1910-11	688	\$2,393,649	.....
1908-9	675	1,832,905	1911-12	688	2,360,505	.....
1909-10	688	2,028,806	1912-13	730	3,055,727	\$1,096,852

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Common.....	\$8,915,700	Debenture Stock (4%).....	\$7,525,000
Preference (5%).....	10,000,000	Debentures (5%).....	8,500,000
Preference 2d (4%).....	3,670,245	Cons. Deb. Stk. (5%).....	8,328,950

Capitalization		Total	Per Mile
Stock.....	£4,517,189	\$22,585,945	\$30,940
Debentures and Debenture Stock.....	2,870,790	14,353,950	19,663
Total.....	7,387,979	36,939,895	50,603

Income Account Year Ending June 30, 1913

Average miles operated, 730.		
	Total	Per Mile
Gross Receipts.....	\$611,145	\$3,055,727
Operating Expenses.....	345,846	1,729,231
Net Receipts.....	265,299	1,326,496
Other Income.....	71,391	356,957
Total Net Income.....	336,690	1,683,453
Fixed Charges.....	117,320	586,601
*Surplus.....	219,370	1,096,852

Operating Expenses		Total	Per Mile
Maintenance of Way.....	£51,669	\$258,343	\$354
Maintenance of Equipment.....	43,844	219,221	300
Traffic and Transportation Expenses.....	165,436	827,180	1,133
†General Expenses.....	84,897	424,487	582

Ratio of Operating Expenses to Gross Receipts, 56.6 per cent.

*This Surplus before deducting \$450,042 (£90,008) Renewals and Abnormal Flood Expenditure—Balance after deduction of Reserve and Renewals Account.

†Includes \$145,908 (£21,182) expenses of Maritime Service.

Other Income above includes \$338,344 (£67,669) received from the Argentine Ry. under Working Agreement, of which \$219,468 is repayable out of future Surplus, \$12,500 (£2,500) from Subvention Account and \$5,014 (£1,003) from Sale of Land.

Appropriation of Gross Income		1912-13	1911-12
For Maintenance Expenses.....		14.0%	17.0%
For Traffic, Transportation and General Expenses.....		36.7%	41.8%
For Fixed Charges.....		17.2%	18.0%
For Surplus.....		32.1%	23.2%
		100.0%	100.0%

	1912-13	1911-12	1910-11	1909-10
Ton miles per mile of road.....	183,616	107,932	111,901	97,747
Passenger miles per mile of road.....	27,346	25,755	25,954	26,480

AND CENTRAL AMERICA

NOTES

This line extends from Zarate (168 miles from Buenos Ayres) via ferry to Ibicuy (49 miles) and from the latter point to Concordia in the province of Entre Rios, with several branches and extensions. This line forms part of a direct through route between Buenos Ayres and Asuncion, the capital of Paraguay. Through passenger service via this railway and via connecting lines was established between these two points October, 1913. It is expected that the ferry route across the Parana River will be shortened from 49 miles to 18 miles, and that the company will secure improved terminal facilities in Buenos Ayres. The tracks of the Cordoba Central System will be used and the latter railway will construct a third rail owing to the difference in the gauges of the two lines. (Buenos Ayres Central Ry. tracks are at present used between Zarate and Buenos Ayres.)

The first preference stock is entitled to dividends at the rate of 5% per annum. On June 30, 1904, 39½% in back dividends remained due on this stock. In lieu of the same the first preference shareholders received 105% in 4% non-cumulative second preference stock and agreed to waive their cumulative right until dividends shall have been paid on both classes of preference stock for three consecutive years.

In each of the years 1909-10, 1910-11, 1911-12 and 1912-13, 5% was paid on the first preference stock, while 1%, 4%, 4% and 4% each was paid on the second preference stock. In 1910-11, 1½% was paid on the ordinary stock. No dividend was paid on the ordinary stock in 1909-10, 1911-12 and 1912-13.

During 1912-13 the principal freight traffic consisted of general merchandise (30%), wheat (11½%), linseed (17.4%) and live stock (12.2%).

On July 12, 1912, a company (incorporated in Maine) known as the Argentine Ry. (which see) was formed for the purpose of consolidating and constructing various railway lines in the Republic of Argentine. This company has issued \$15,000,000 6% preferred stock and \$30,000,000 common stock, and is controlled by interests similar to those in control of the Brazil Ry. (Speyer Bros., Kuhn, Loeb & Co., Sir Wm. C. Van Horne, Percival Farquhar, etc.) The charter of this company is a broad one and empowers it to operate railways, traction lines, gas and electric light, heat and power plants, to deal in land, to mine, to refine oil, etc., etc. Under date of October 22, 1912, the Argentine Ry. offered to lease the Entre Rios Rys., Ltd. Under terms of the agreement in the event of the Net Revenue not being equal in amount to the interest and dividends on the debenture and preference stock issued and to the following dividends on the ordinary stock of the Entre Rios Rys., Ltd., viz.: 2% per annum from November 1, 1912, to June 30, 1913; 3% for 1913-14; 4% for 1914-15 and 1915-16, and 5% thereafter, the Argentine Ry. guarantees to provide from its own resources towards any deficiency there may be, a sum not exceeding in any one year, the amount of the dividend above specified for that year on the ordinary stock. The Argentine Ry. further guaranteed the dividends on the first and second preference shares for 1912-13. The dividend on the first preference shares will be cumulative hereafter. All surplus, above dividend requirements, will be divided 25% to the Entre Rios Rys. and 75% to the Argentine Ry. The profits from the sale of lands at Ibicuy will be divided, 75% to the Entre Rios Rys. and 25% to the Argentine Ry. In 1912-13 under the terms of this agreement the Argentine Ry. paid to the Entre Rios Ry. the sum of £67,669, of which £43,894 is repayable out of future surplus revenues.

THE RAILWAYS OF SOUTH

The Net Revenue of the Entre Rios Rys., including amounts received from the Argentine Ry. under the working agreement (as above), is applicable to the payment of dividends in full on the preference stocks before dividends are paid on the ordinary stock.

Prior to September, 1913, this company had acquired over £800,000 and the Argentine Ry. over £500,000 stock of the Argentine North Eastern Ry. (see that company).

Negotiations are in progress between the Entre Rios Rys. and the Government of Entre Rios in which the former proposes to take over these provincial lines and operate them.

In 1912-13, £200,000 4% Debenture Stock and £750,000 5% Debenture Stock was issued, the proceeds to be used to acquire equipment, etc. See Argentine Ry., Argentine North Eastern Ry. and Buenos Ayres Central Ry.

Villa Maria & Rufino Ry.

The Buenos Ayres & Pacific Ry. operates this road under agreement and guarantees the interest on its Debentures and a dividend of 4% on its stock. Beginning July 1, 1917, the rate will be 4½%. Prior to June 30, 1913, the dividend rate was 3½%. The Capitalization of the company as of June 30, 1913, was as follows:

First Debenture Stock 4%.....	\$3,367,500	£673,500
Guaranteed Stock.....	1,968,750	393,750
	<u>\$5,336,250</u>	<u>£1,067,250</u>

The Gross Receipts for the last five years to June 30 were as follows:

1909.....	£75,183	\$375,915
1910.....	70,351	351,755
1911.....	77,308	386,540
1912.....	62,792	313,960
1913.....	61,903	309,515

The lease of this railway by the Buenos Ayres & Pacific Ry. expires 1920. The Government may purchase the line at 20% above its adjudged value.

The Villa Maria & Rufino Ry. connects the main line of the Buenos Ayres & Pacific Ry. (at Rufino) with the Central Argentine Ry. at Villa Maria.

On June 30, 1913, there was due the B. A. & P. Ry. for advances made by the latter the sum of £67,477 (\$337,387).

AND CENTRAL AMERICA

BOLIVIA AND CHILE

Bolivia.

Bolivia is a country in which railroad building is an expensive luxury. As is well known, the Republic has no seacoast and to reach it from the Pacific the ports of either Chili or Peru must be used, necessitating a sharp, zigzag climb through the passes of the Andes. La Paz, the capital and chief city, has usually been the objective point striven for by the railways and to-day it has three outlets to the Pacific, namely: the Arica-La Paz Ry., completed in 1912-13; the Antofagasta (Chili) and Bolivia Ry. and the Peruvian Corporation's Guaqui-La Paz Ry.-Lake Titicaca-Southern Ry. of Peru System. The two last named of these companies are described elsewhere. The journey to the coast by these lines requires about 45 hours and 29 hours respectively.

The Arica-La Paz Ry. (just completed) forms the shortest existing route to the Pacific. It is about 248 miles in length and its construction was extremely costly, the rack rail system being used for a stretch of fully 21 miles. The journey from capital to coast requires about 18 hours, and the highest altitude reached is about 14,108 feet. A branch has been built to the Corocoro Mining District.

The Antofagasta (Chili) & Bolivia Ry. and its subsidiary, the Bolivia Ry., are the nation's principal highways of commerce. The former railway, running from the Chilean port of Antofagasta, enters Bolivia near Ollague (275 miles from the coast) and runs in a northerly direction, keeping at a level of from 12,000 to 12,500 feet, until it meets the Bolivia Ry. at Oruro, the latter line continuing on to Viachi, the junction point with the Guaqui-La Paz Ry. From Ollague Station, a branch 60 miles long has been constructed to Collahuasi, where some important copper mines are located. This road climbs to an altitude of 15,809 feet. A line, completed in 1912 by the Bolivia Ry., from Mulatos on the main line to the mining center, Potosi (108 miles), reaches a summit of 15,814 feet and represents another wonderful feat of engineering. This extension is surveyed to Sucre, the former capital, about 105 miles beyond Potosi, and, when completed, will tap a country noted for the richness of its agricultural lands. Another line—from Uyani on the A. & B. Ry. to Tupiza—is being built by the Bolivia Ry. Tupiza lies in a southerly direction about 125 miles from the starting point of the extension and only 66 miles from the Argentinian frontier. The road is eventually to be built to the boundary at La Quiaca, where it will meet the Northern Central of Argentine (Government) Ry., extending to Tucuman, where connection is afforded with the Central Argentine and Cordoba Central Systems to Buenos Ayres. The Antofagasta & Bolivia's new line into La Paz is being surveyed northward to Yungas (125 miles).

There is another small railway in Bolivia 20½ miles long, running from Uyani to the Huanchaca Silver Mines, located at Pulacaya (population 8,000) and worked by the Franco-Chilian Co.

A considerable additional mileage of railways is to be built in the Republic through a subsidiary of the Brazil Ry. (controlled by the Farquhar-Pearson Syndicate), known as the Bolivian Development & Colonization Co., which is incorporated in the United States with a capital of \$15,000,000. The com-

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pany has obtained from the Bolivian Government a concession for the construction of the following railways: (a) From La Paz to Puerto Brais or other point on the River Beni in the neighborhood of Puerto Brais which may appear more suitable, to form in connection with that river, the Madeira-Mamore Ry. and the Madeira River a through route to the navigable portion of the Amazon River; (b) from Santa Cruz, or other suitable point on the Puerto Rojas line, to Puerto Suarez or other point on the River Paraguay which may be found more adaptable for the purposes of building a port; (c) from Potosi to Sucre, with extension to Lagunillas or to other point between Abapo and Villa Montes.

The necessary funds for the construction and equipment of the railways and ports are to be obtained by the issue of bonds subject to the following conditions: For each £45,000 (\$219,000) expended the company will issue £50,000 (\$243,325) of bonds at 5%, this interest being guaranteed by the Bolivian Government, which is liberally aiding all railway projects. This guaranty remains in force for a term of 20 years from the date of opening to traffic. The deposit required by law to be paid by the concessionaire was fixed at £80,000 (\$389,320). Although it was stipulated in the concession that the survey work, etc., on these lines should commence within six months from the date of the signing of the contract, the company obtained a year's postponement of all the periods named in the concession in view of the stringency of the European money markets, and also permission to defer payment of £60,000 (\$292,000) of the deposit. The syndicate also acquired a controlling interest in the Antofagasta-Bolivia Ry. (control since said to have been relinquished) and in the company which possesses the concession for the line from Santa Cruz to Yacuiba.

The trade routes to the Pacific Ocean are described in an earlier paragraph; to reach the Atlantic seaboard under present conditions two routes exist: (1) La Paz to Uyani by rail, thence to the border of Argentine at La Quiaca by coach or horseback, thence to Buenos Ayres by rail; (2) by mule from La Paz to the Beni River, thence by water to a connection with the Madeira-Mamore Ry., extending around the rapids to the navigable part of the Madeira River at Port San Antonio, where steamers may be taken to the Amazon ports of Manaos and Para.

At the end of 1912 there were in operation in this Mountain Republic only about 797 miles of railway. An additional 380 miles were being built while about 1,800 miles were projected. Bolivia, in area 708,195 square miles, equal to over 14 times the size of New York State or $2\frac{2}{3}$ times the size of Texas, has a population of only about 2,300,000. The country has wonderful mineral resources, there being a vast developed and undeveloped wealth of copper and tin, while silver has been mined for centuries.

Summarized, Bolivia's mineral exports for 1911 and 1912 have been as follows:

Products	1911	1912	Products	1911	1912
Antimony....	\$26,615	\$1,994	Tin.....	\$20,476,806	\$23,289,732
Bismuth.....	819,297	784,183	Wolfram..	89,932	114,847
Copper.....	555,080	1,311,156	Zinc.....	144,899	129,243
Gold.....	22,313	23,039			
Silver.....	1,784,633	1,676,704	Total..	\$23,919,575	\$27,330,898

The total exports of the nation for 1912 were valued at upwards of \$36,-000,000; the imports for 1911 (latest figures available) were valued at \$23,268,562.

See Madeira-Mamore Ry. under Brazil.

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Chile

Chile, one of the most progressive of the American Republics, has an area of 292,100 square miles and a population of nearly 4,000,000. It extends from 17° 15' to 60° south latitude, covering a total of nearly 43°, its coast line totalling 2,625 miles. In other words its length would equal the distance from Newfoundland to Venezuela, or from Quebec to Liverpool. Its width varies from 100 to 250 miles, averaging about 112 miles. The country produces a wealth of minerals, among which nitrate stands first. The Republic leads the world in the production of this mineral and produces the sixth largest amount of copper, also considerable quantities of gold, silver, iron, borate of lime, iodine, etc.

On January 1, 1913, 3,800 miles of railways were in operation in the Republic, this including 1,860 miles of privately owned lines (mostly controlled by the British) and about 1,940 miles owned by the Government.

In the pages to follow directly or elsewhere, will be found descriptions of three important railways which are operated independently of Government control, these three lines being, the Antofagasta (Chile) & Bolivia Ry. (see Chapter on Bolivia); the Nitrate Rys. and the Chilean Transandine Ry. The first named company extends from the Ports of Antofagasta, and Mejillones to Oruro and La Paz with branches, about one-half of its 769 miles being in this republic. This railway, a portion of which is to be double-tracked and the Nitrate Rys., extend through the extensive nitrate fields of Chile. The latter line has its principal port at Iquique.

Among the railways privately owned which are not described in this book, may be mentioned the Arica & Tacna Ry. the Anglo Chilean Ry., the Aranco Ry., the Aguas Blancas Ry. The Braden Copper Co's Ry., the Taltal Ry., etc.

The **Arica & Tacna Ry.** is the most northerly line in Chile. It runs from the Port of Arica (the terminus of the Arica-La Paz Ry.) in a northerly direction for about 47 miles to Tacna, capital of the province of that name. It was the original intention of the owners of this railway to push on from Tacna to La Paz, Bolivia, but the construction recently of the Arica-La Paz Ry. has eliminated the possibilities of carrying out this plan. The stock of this company is held in Great Britain and nominal dividends are paid regularly.

The **Taltal Ry.** runs inland from the port with a similar name to Arturo Prat and other places in the nitrate district. £180,000 stock (on which 9% is paid) and £242,100, 4½% Debentures are listed on the London Stock Exchange.

The **Aranco Co.'s** railway, which was incorporated in 1884, is about 65 miles in length and extends from Concepcion to Curanilahue, with branches to Aranco, etc. The railways cost upwards of \$3,500,000. The company has listed on the London Stock Exchange £477,800 Stock on which a dividend of 10% was recently paid, together with £578,509 Debenture Stock. The Gross Receipts of the railway for 1913 were upwards of £108,000.

The **Aguas Blancas Ry.** also operates into the nitrate fields. It is controlled by the Antofagasta (Chile) & Bolivia Ry., through ownership of a majority of its £900,000 stock.

The **Braden Copper Co.'s** railway is upwards of 44 miles in length and extends from Rancagua on the Chilean State Rys. to the various mines and smelters of the company.

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The Government is carrying out an extensive railway programme and is expending millions annually on its lines (\$19,400,000 in 1912). Using Valparaíso as an operating base, the so-called "Longitudinal System" is completed, building or projected to Arica in the far north and Puerto Montt on the Corcovado Gulf some 800 miles to the south. This latter section has already been completed while the northern portion of the line has been completed to a point near Iquique. The total system when completed will be 2,132 miles in length, there are also cross lines, including the important one running from Valparaíso to Los Andes, where it meets the Chilean Transandine Ry. which joins the Argentine Transandine Ry. at the heart of the Andes, forming with connections a through route from Valparaíso to Buenos Ayres. About 500 miles of branch lines were surveyed or building in 1913.

The Government also owns the Arica-La Paz Ry. which was completed in 1913 between the port of Arica and La Paz the capital of Bolivia. This railway was built by an English firm Sir John Jackson (Chili) Inc., and was an extremely costly enterprise. It shortens the running time by many hours between the capital of Bolivia and the sea.

The Government recently purchased the Copiapo Ry., running into extensive coal fields and contemplate the building of two additional transcontinental lines including one to Paso Pino Hachado where it will meet the Buenos Ayres Gt. Southern Ry. Other lines are also projected. 12,187,807 passengers were carried in 1912 by the State Railways.

The highest altitude reached by any of the Chilean railways is 15,809 feet, this point being Collahuasi on a branch of the Antofagasta (Chili) & Bolivia Ry. Extensive copper mines are located at this place.

Chili's foreign commerce for 1912 totalled \$261,954,195, of which \$139,878,201 represented export and \$122,075,994 imports.

Nitrate is the principal export; Iquique on the Nitrate Rys. and Antofagasta and Mejillones on the Antofagasta (Chili) & Bolivia Ry. are the principal shipping points for this commodity. Copper, borate of lime, iodine, wheat, wool, etc., are sent abroad in large quantities.

The completion of the Panama Canal will mean much to this Republic which has not been slow to grasp the fact and is making every preparation for the expected increase in trade. About \$13,000,000 is being expended on extensive port works at Valparaíso, while upwards of \$20,000,000 it is expected will be spent on the more northerly ports such as Antofagasta, Tocopillo, Iquique, Patillos, Pisagua, etc. A vast amount of American Capital is being invested in Chili, principally in its mines, and more is to follow. Santiago, the nation's capital, has now taken the lead among the cities of the West Coast Countries, its population exceeding 400,000. Valparaíso has a population of 250,000.

Chili's outlook may be said to be generally bright indeed.

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Antofagasta (Chili) & Bolivia Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1911	\$7,584,493 £1,516,885	1912	*769	†\$8,319,179 †£1,663,935

*794 miles, December 31, 1913.

†Gross Receipts for 1913 were approximately \$9,800,000 (£1,860,000).

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Deferred Ordinary.....	\$10,000,000	Debenture Stock (4%).....	\$5,000,000
*Preferred Ordinary (6%)..	10,000,000	Debenture Stock (4½%).....	5,000,000
†Preference (5%).....	10,000,000	‡Debenture Stock (5%).....	10,500,000

*Shares with Deferred Ordinary in all dividends over 10% per annum.

†Cumulative.

‡Includes \$3,000,000 (£600,000) Bolivia Debenture Stock, redeemable in 1960 at 110 and secured by £729,065 5% Bolivia Ry. Bonds guaranteed by the Government of Bolivia.

Capitalization		
	Total	Per Mile
Stock.....	£6,000,000 \$30,000,000	\$39,012
Bonds.....	4,100,000 20,500,000	26,658
Total.....	10,100,000 50,500,000	65,670

Fixed Charges below include \$151,705 (£30,341) account of Income Tax.

Gross Receipts below include \$677,210 (£135,442) Mole Receipts, Operating Expenses (General Expenses) below include \$422,920 (£84,584) Mole Expenses.

Income Account Year Ending December 31, 1912

Average miles operated, 769.

	Total	Per Mile
Gross Receipts.....	£1,663,836 \$8,319,180	\$10,818
Operating Expenses.....	945,490 4,727,450	6,147
Net Receipts.....	718,346 3,591,730	4,671
Other Income.....	144,658 723,290	941
Total Net Income.....	863,004 4,315,020	5,612
Fixed Charges.....	220,341 1,101,705	1,438
*Surplus.....	642,663 3,213,315	4,179

Operating Expenses		
Maintenance of Way.....	£218,387 \$1,091,935	\$1,420
Maintenance of Equipment.....	166,810 834,050	1,085
Traffic and Transportation Expenses.....	373,816 1,869,080	2,430
General and Mole Expenses.....	186,477 932,385	1,212

Ratio of Operating Expenses to Operating Revenues, 56.8 per cent.

*This Surplus before deducting \$1,000,000 (£200,000) appropriated to Reserve Account, \$39,125 (£7,825) to Insurance Fund and \$300,000 (£60,000) appropriation towards cost of Installation of Brakes and Automatic Couplers.

Other Income above includes \$278,715 (£55,743) Net Receipts from Waterworks. Gross Receipts were \$436,320 (£87,264) and Expenses were \$157,600 (£31,520). In 1911, Net Receipts were £43,478.

Appropriation of Gross Income

	1912
For Maintenance Expenses.....	21.8%
For Traffic, Transportation and General Expenses.....	31.0%
For Fixed Charges.....	12.2%
For Surplus.....	35.5%
	100.0%

NOTES.

The Preference Stock of this company is entitled to and receives dividends of 5% per annum. Dividends are cumulative. The Preferred Ordinary Stock is entitled to dividends of 5% per annum, non-cumulative, in priority to the Deferred Ordinary Stock. After the Deferred Ordinary Stock receives 10% both issues share alike in all further distribution of profits. \$10,000,000

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of each of these three classes of stock has been issued and are outstanding. $8\frac{1}{2}\%$ was paid from the surplus of 1912 on the Deferred Ordinary Stock, against 8% in 1911.

The $4\frac{1}{2}\%$ Perpetual Debenture Stock is secured by a first charge on the property, ranking prior to the $4\frac{1}{2}\%$ and 5% Debenture Stock. These latter Debenture Stocks are redeemable in 1940 at 105 and 110 respectively. \$5,000,000, \$5,000,000 and \$7,500,000 respectively of these classes of Debenture Stocks were outstanding December 31, 1912. On that date \$3,000,000 (£600,000 5% (Bolivia) Debenture Stock, redeemable in 1960 at 110, was also outstanding, being secured by £729,065 bonds of the Bolivia Ry. guaranteed by the Government of Bolivia.

The balance sheet of the company as of December 31, 1912, showed a substantial margin of Cash and Current Assets, Stores, etc., over Current and Accrued Liabilities. There were large amounts to the credit of various Reserve Accounts.

This railway operates in the two Republics of Chili and Bolivia. The tidewater terminals are at Antofagasta on Morena Bay, (Pacific Ocean), a port from which a large quantity of nitrate is shipped, and also at Mejillones. The railway extends through the vast nitrate fields of Chili into Bolivia, which latter country is entered at an altitude of 12,000 feet. At Uyani (Bolivia), about 379 miles from Antofagasta, the great silver district of Huanchaca is reached. From Uyani the railway continues to Oruro, where connection is made with the Bolivia Ry., a leased line (see following). This latter line is used between Oruro and Viachi. From Viachi the Antofagasta & Bolivia Ry. proper was, in 1913, constructing a line to La Paz, the principal city of Bolivia. The mileage between Antofagasta and Uyani is of 2 ft. 6 in. gauge which is to be broadened to the metre gauge, conforming with the standard adopted by connecting lines.

The Antofagasta & Bolivia Ry. expended, prior to December 31, 1912, the sum of \$8,229,988, (£1,645,997. 12s.), for the acquisition of the common stock and one-half of the First Mortgage 5% bonds of the Bolivia Ry. The Bolivia Ry. bonds are all guaranteed as to interest by the Government of Bolivia. The First Mortgage 5% bonds not owned by the Antofagasta & Bolivia Ry. bear the guarantee of this company and also of the Bolivian Government. (See Bolivia Ry.).

The principal commodities handled by the Antofagasta & Bolivia Ry. in 1912 were nitrate and nitrate earth, 873,212 tons; borate 43,855 tons; silver ore, 79,889 tons; tin ore, (from Bolivia), 39,958 tons; coal, 255,856 tons; petroleum, 30,805 tons; etc.

In the year 1911 one of the subsidiaries of the Brazil Ry. Co. acquired control of this line. This subsidiary, the Bolivia Development & Colonization Co., has projected a line from La Paz, Bolivia, down the eastern slope of the Andes to the Beni River. The building of this line will establish communications between the country adjacent to the Antofagasta & Bolivia Ry. and Eastern Bolivia, and will afford connections (via rail and water) with the Madeira-Mamore Ry. and the Amazon.

Early in 1914, the Brazil Ry. interests sold their holdings in Antofagasta stock to Messrs. J. H. Shroeder & Co. of London.

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Bolivia Ry.

(Leased by the Antofagasta & Bolivia Railway.)

This company was incorporated in the United States in 1907, and holds a perpetual concession from the Republic of Bolivia for the construction of lines of railway in that Republic,—in all about 773 miles. This mileage includes a line from Oruro, the northern terminal of the Antofagasta & Bolivia Ry. (see that company), to Viachi (126 miles), from which latter point the A. & B. Ry. is building a line to La Paz, the principal city of Bolivia (19 miles). \$6,037,332 has been expended on the Oruro-Viachi line to December 31, 1912. The Bolivia Ry. is also building, or has projected, lines as follows: (1) from Oruro to Cochabamba (132 miles) on which \$8,024,312 had been expended to December 31, 1912; (2) from Rio-Mulato to Potasi (106 miles), on which \$7,254,048 had been expended to December 31, 1912; (3) from Uyuni (on the A. & B. Ry.) to Tupiza; (4) from La Paz to Puerto Pando; (5) from Potasi to Sucre, (the Capital), etc. These various lines, when completed, will give a comprehensive railway system to Bolivia, and will greatly aid in opening up the vast resources of that Republic.

Under the concession granted to the Bolivia Ry. by the Government the company may import all materials, equipment, etc., free from all duty for a period of thirty years, and furthermore the company is relieved from the payment of all taxes. The Republic of Bolivia purchases at par (as issued) Second Mortgage Income bonds, up to £2,500,000, at the rate of £20,000 Income bonds for every £55,000 expended on the line up to £5,500,000. The Government guarantees that it will make up any deficiency in interest on the First Mortgage bonds. The amount required to make up this deficiency was in 1911, \$365,561, and in 1912, \$566,835.

A controlling interest in the stock of this company is owned by the Antofagasta (Chili) & Bolivia Ry., which company leases the property. Under terms of the lease the lessee agrees to purchase one-half of the Bolivia Ry.'s First Mortgage 5% bonds (due 1927) as issued, and agrees to pay to that company 25% of the lessor's Gross Income from January 1, 1909 to January 1, 1914; 30% from 1914 to 1919; 35% from 1919 to 1924, and 40% thereafter. The Gross Earnings for 1912 (Viachi-Oruro line,— only mileage in operation) amounted to \$301,948, as against \$288,368 in 1911. On December 31, 1912, \$10,000,000 stock, \$15,332,328 First Mortgage 5% bonds, and \$10,221,552 Second Mortgage bonds were outstanding. The First Mortgage bonds are listed on the New York Stock Exchange.

As of December 31, 1912, Working Assets, (including \$1,081,191 Material and Supplies), amounted to \$2,560,798 as against Working Liabilities to the amount of \$580,550. There is a contingent liability to the Bolivian Government for interest advances,—such amounts being repayable out of surplus profits.

The Bolivia Ry. owned on December 31, 1912, 10 locomotives (including 8 American Consolidation locomotives), 29 passenger cars, and 323 freight and service cars.

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Guaqui-La-Paz Ry.

Bolivia.

This railway, which is controlled by the Peruvian Corporation (see description of latter in chapter on Peru) extends from Guaqui, on the Bolivian shores of Lake Titicaca, to La Paz (59 miles) etc. At Guaqui connection is afforded with the line of steamers, run by the Peruvian Corporation, which cross the lake to Puno, on the Peruvian shore, where a branch of the Southern Ry. of Peru extends to Juliaca, to meet the main line running to the Port of Mollendo. Arrangements have been completed reducing the through time between La Paz and Callao via this railway, Lake Titicaca, the Southern Ry. of Peru and the Pacific Steam Navigation Co., to fifty-seven hours.

Prior to 1910 when it was sold to the Peruvian Corporation this railway was the property of the Bolivian Government. A portion of it has been used for several years by the Antofagasta (Chili) & Bolivia Ry. to afford it an entrance into La Paz, but in 1913 the latter railway had practically completed a line of its own to the capital.

The earnings of the Guaqui-La Paz Ry. for 1912-13 and 1911-12 were as follows:

	—1912-13—		—1911-12—	
Gross Receipts.....	£87,921	\$439,605	£64,381	\$321,905
Working Expenses...	49,570	247,850	36,880	184,400
Net Receipts.....	£38,351	\$181,755	£27,501	\$137,505

The Gross Receipts per mile for 1912-13 were approximately \$7,457 as against approximately \$5,456 for 1911-12.

The entire Net Receipts for 1912-13 (£38,351) were paid to the Peruvian Corporation, the latter to June 30, 1913, having expended £371,938 (\$1,859,690) in purchasing and improving the property.

See under Peru: the Peruvian Corporation, Southern Ry. of Peru.

AND CENTRAL AMERICA

Chilian Transandine Rys.

(Ferro Carrel Transandino)

Year	Average Miles Operated	Gross
*1911-12	†43	‡\$431,400
		‡£86,280

*Latest report rendered; published June 17, 1913. †Estimated. ‡Traffic was completely interrupted for several weeks owing to severe avalanches in the Andes, this caused a considerable loss in Revenues.

Stock Outstanding June 30, 1912		Bonds Outstanding June 30, 1912	
Ordinary.....	\$500,000	*Debenture Bonds.....	\$7,425,000
Preferred.....	7,000,000	Equipment.....	

*Series "A," £278,100; Series "B," £538,650; Series "C," £668,250.

Capitalization		Total	Per Mile
Stock.....	£1,500,000	\$7,500,000	\$174,419
Bonds.....	1,485,000	7,425,000	172,674
Total.....	2,985,000	14,925,000	347,093

Fixed Charges below represent interest on above bonds. This interest was advanced by the Government and is repayable under certain conditions (see Notes).

Income Account Year ending June 30, 1912

Average miles operated, 43 (approximately).

	Total	Per Mile
Gross Receipts.....	£86,280	\$431,400
Operating Expenses.....	74,172	370,860
Net Receipts.....	12,108	60,540
Other Income.....	74,250	371,250
Total Net Income.....	86,358	431,790
Fixed Charges.....	74,250	371,250
*Surplus.....	12,108	60,540

Operating Expenses

	Total	Per Mile
Maintenance of Way.....	£20,962	\$104,810
Maintenance of Equipment.....	14,396	71,980
Traffic and Transportation Expenses.....	25,231	126,155
General Expenses.....	13,583	67,915

Ratio of Operating Expenses to Gross Receipts 86.0 per cent.

*To this Surplus was added \$7,895 (£1,579) brought forward at July 1, 1911, making Total \$68,435 (£13,687). From this Total there was deducted \$67,670 (£13,534) Net Loss on Working of the First and Second Sections prior to July 1, 1908, less Profit on Working of the Third Section prior to May 1, 1910, credited to Transandine Construction Co. L't'd. (See Notes).

The Other Income above represents advances for interest guaranteed by the Government of Chili.

Appropriation of Gross Income

	1911-12
For Maintenance Expenses.....	22.0 %
For Traffic, Transportation and General Expenses.....	24.1 %
For Fixed Charges.....	46.3 %
For Surplus.....	7.6 %
	100.0 %

NOTES.

The Chilian Transandine Ry. forms a part of South America's famous Ocean-to-Ocean route. The line is of metre gauge and extends from Los Andes, the terminus of the Chilian National (Government) Ry. line from Valparaiso, to the Argentine frontier. The construction of the line involved tremendous difficulties. From Los Andes to the tunnel (about 43 miles) there is a rise of 8,000 feet, the last 7 miles necessitating a climb of over 3,100 feet. Heavy grades reaching a maximum of about 8% are to be found necessitating the use

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of the rack system in various places, and making unavoidable many zigzag curves. At one point as the line follows the mountain side above the winding Aconcagua River, it enters a tunnel through a spur, and then emerges on the opposite side on the brink of a chasm—the Soldier's Leap, which is a narrow wedge-shaped fissure in the rock. A bridge carries the line over the stream, at a height of fully 200 feet, to a narrow ledge which is blasted out of the opposite cliff-face. The heavy gradients and numerous curves encountered naturally reduce the freight-carrying capacity of trains; compels high operating costs and renders only low speed possible. The time taken to make the trip from Valparaiso to Buenos Ayres is about forty hours as against about eleven days via the Magellan Strait.

The company has been compelled to call to its aid the Government of Chili, in an endeavor to put the line in condition to enable it to be worked efficiently and economically all the year round. The heavy snow storms in the mountains have made traffic in the winter months almost impossible. From May to October, 1912, the line was out of commission for through traffic, while frequent delays have been unavoidable owing to several washouts on the lower sections of the line.

The entire outstanding bonded debt consisting of £278,100 Series "A," £538,650 Series "B" and £668,250 Series "C" Debenture bonds, is guaranteed by the Government for 20 years from the completion of each section. Section one was completed June 30, 1900; Section two, April 7, 1908, and Section three May 1, 1911. The bonds are repayable 1960. Net earnings up to 5% on the outstanding debt are to go to the Government in repayment for guarantees. Earnings above 5% and up to 8% go to the company. All earnings over 8% go to the Government to reimburse it for interest advances, until all such advances are repaid. The company agrees to set aside annually (when earned) before payment of any dividends or appropriation of any reserves £30,000 to redeem debentures until the total outstanding amount is reduced to £1,000,000. The authorized amount of Debenture bonds is £1,500,000.

No dividends have been paid on the company's stock.

See under Argentine Republic: Buenos Ayres & Pacific Ry.; Argentine Great Western Ry.; Argentine Transandine Ry.

AND CENTRAL AMERICA

Nitrate Rys.

Year	Avg. Miles Oper.	Gross Receipts
1912	*377	\$3,426,630 £685,326

*The actual mileage of main track operated in less than the amount here stated. This mileage includes that of spurs and sidings. The statistics of main track were not available, therefore the "per mile statistics" as given below are less than the actual figures.

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Ordinary.....	\$7,414,450	Fixed Interest.....	\$2,992,000
*Preferred (7%).....	865,550		
†Deferred.....	865,550		

*Styled "Preferred Converted Ordinary."
†Style "Deferred Converted Ordinary."

Capitalization		Total	Per Mile
Stock.....	£1,829,110	\$9,145,550	\$24,259
Bonds.....	598,400	2,992,000	7,936
Total.....	2,427,510	12,137,550	32,195

Fixed Charges below include \$989,925 (£197,985) paid account of Sinking Fund and \$40,120 (£8,024) Income Tax.

Income Account Year Ending December 31, 1912

Average miles operated, 377.

	Total	Per Mile
Gross Receipts.....	£685,326 \$3,426,630	\$9,089
Operating Expenses.....	336,068 1,680,340	4,457
Net Receipts.....	349,258 1,746,290	4,632
Other Income.....	6,333 31,665	84
Total Net Income.....	355,591 1,777,955	4,716
Fixed Charges.....	245,690 1,228,450	3,258
*Surplus.....	109,901 549,505	1,458

Operating Expenses

Maintenance of Ways.....	£36,521	\$182,605	\$484
Locomotive Expenses.....	216,584	1,082,920	2,873
Traffic and Telegraph Expenses.....	45,916	229,580	609
General Expenses and Exchange Account.....	37,047	185,235	491

Ratio of Operating Expenses to Gross Receipts, 49.0 per cent.

*This Surplus before deducting \$22,500 (£4,500) for Depreciation of Investment, \$45,805 (£9,161) Expenditures on New Sidings and Buildings during 1912 and \$150,000 (£30,000) Renewal of Rolling Stock Account.

Appropriation of Gross Income

	1912
For Maintenance of Way and Locomotive Expenses.....	36.6%
For Traffic, Transportation and General Expenses.....	12.0%
For Fixed Charges.....	35.5%
For Surplus.....	15.9%
	100.0%

NOTES

This company operates about 377 miles of railway in the State of Tarapaca, Chili. The line passes through large portions of the great nitrate region of Northern Chili and is composed of one main stem and a considerable number of branches and spurs to various nitrate beds, etc. The tidewater terminals of the Nitrate Rys. are at Iquique and Pisagua, from which two ports about 28% of the nitrate of soda exported by Chili is shipped. All of the nitrate exported from these two ports was carried to tidewater by the Nitrate Rys. The earnings from traffic in this commodity were for 1912 £349,528. The railway also handles a large quantity of coal.

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The Nitrate Rys. paid in dividends from the surplus for 1912: $7\frac{1}{2}\%$ on the Ordinary Unconverted Shares; 7% on the Preferred Converted Shares, and $\frac{1}{2}\%$ on the Deferred Converted Shares.

The company had outstanding December, 1912, £598,400 5% Mortgage bonds (amount since reduced by Sinking Fund). The company originally had outstanding £115,800 7% bonds, £124,800 6% bonds and £2,000,000 5% bonds. Of these bonds all excepting the £598,400 5% bonds above mentioned, had been redeemed prior to December 31, 1912. A total of £197,985 was appropriated from the earnings of 1912 account of Sinking Fund and a total of £188,800 bonds were redeemed in 1912.

The Balance Sheet as of December 31, 1912, showed a large excess of Cash, Bills Receivable, Stores, etc., over Current Liabilities. There were large credits to various Reserve Accounts and the company generally showed itself to be in excellent financial condition.

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BRAZIL.

Brazil ranks about twelfth among the nations of the world in its total of railway mileage, Argentine being the only South American Republic surpassing it. The vast increase in the trade of Brazil has stimulated the construction of railroads and continually through this means new sections of the country are being placed in communication with the outer world. The Republic of Brazil is the fourth largest country in the world in size, if we exclude Alaska from the total area of the United States; it is about 200,000 square miles greater in area than the United States, excluding Alaska, or in other words its area would cover the United States and in addition would again cover New England and the Middle Atlantic States. The population is about 21,000,000, of which total 1,000,000 are in Rio de Janeiro, well over 300,000 in Sao Paulo, 280,000 in Bahia, 200,000 in Para, 200,000 in Recife (Pernambuco), 130,000 in Porto Alegre and about 100,000 in Manaos.

The rivers and the vast seaboard of the country have somewhat obviated the necessity for extensive railroad building. Brazil not only has upwards of 5,000 miles of seacoast and the greatest river in the world, the Amazon, the basin of which covers about 3,350,000 square miles, but it has fully a dozen rivers averaging from 1,000 to 3,000 miles in length. Most of these rivers are tributaries of the Amazon; 10,000 miles of river are navigable for steamers and 20,000 miles additional navigable for flat boats and light draught vessels.

Railway Extensions

On December 31, 1911, the railroad lines in actual operation aggregated 13,372 miles, while during 1912 there were finished and turned over to traffic 472 miles more. On the Madeira-Mamore Ry. the last stretch of 43 miles from Ribeirao to Guajara Mirim was finished, completing the construction of this road and throwing open to traffic a total extension of 218 miles. On the Tocantins Ry., 27 miles have been constructed and are now ready for traffic in the States of Goyaz and Bahia, 8 miles are under construction, and plans for 76 miles more have been approved.

Construction work on the railroad from S. Luiz to Caixas, in the State of Maranhao, the length of which is about 182 miles, is steadily progressing. Although the track between Caixas-Codo and Rosario-Itapicuru has not been turned over to actual traffic, the work is far advanced, and this road will be in service before the end of 1913.

On the South American Construction Co's railroad there are already in use 454 miles of track, and there are to be added to this 19 miles extending from Fortaleza to Crato, in the State of Ceara, and 24 miles from Camocim, Ceara, to Therezina, Piauh, and also 19 miles from Fortaleza to Itapipoca.

On the Central Rio Grande do Norte, in the State bearing the same name, construction is advancing steadily, and before the present year is closed more than 62 miles will be thrown open to actual traffic.

Of an extension of 959 miles of the railroad from Conde, State of Bahia, to

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Piauhy, State of Piauhy, leased by the Great Western of Brazil Ry., the plans for 68 miles have already been approved.

The Bahia Ry. system, operating in the State of Bahia, will add to its present system of 843 miles in actual use the following: 74 miles of 5.25-foot gauge; 579 miles of metre gauge; 190 miles of 4.567-foot gauge; of these, there are in actual construction 254 miles, and plans have been approved for 1,006 miles.

Work on the Northwestern Brazil Ry. has progressed steadily; in 1912, 116 miles extending from Jupia, State of Matto Grosso, to Rio Verde were completed; also 167 miles from Porto Esperanca to Correntes in the same State.

The San Paulo Rio Grande Ry. now operates 837 miles, and plans have been approved for the branch line from Gurapava, State of Rio Grande do Sul. This railroad is continuing the work on the line from Sao Francisco to Uniao, in the State of Santa Catharina.

The Rio Grande do Sul Ry. comprises 1,303 miles in actual operation and various construction work is in progress.

The total mileage of railways in Brazil, inclusive of that under construction and approved, at the end of 1912, was 18,721, or 1,024 miles more than in 1911.

Note: The above description of the railway extensions is taken mostly from the U. S. Consular Reports.

The following table shows the progressive condition of Railways in Brazil since 1854.

	Miles
1854.....	9½
1863.....	265
1872.....	578
1882.....	2,768
1892.....	7,027
1902.....	9,725
1907.....	10,938
1912	14,213

Railway Receipts and Expenditures.

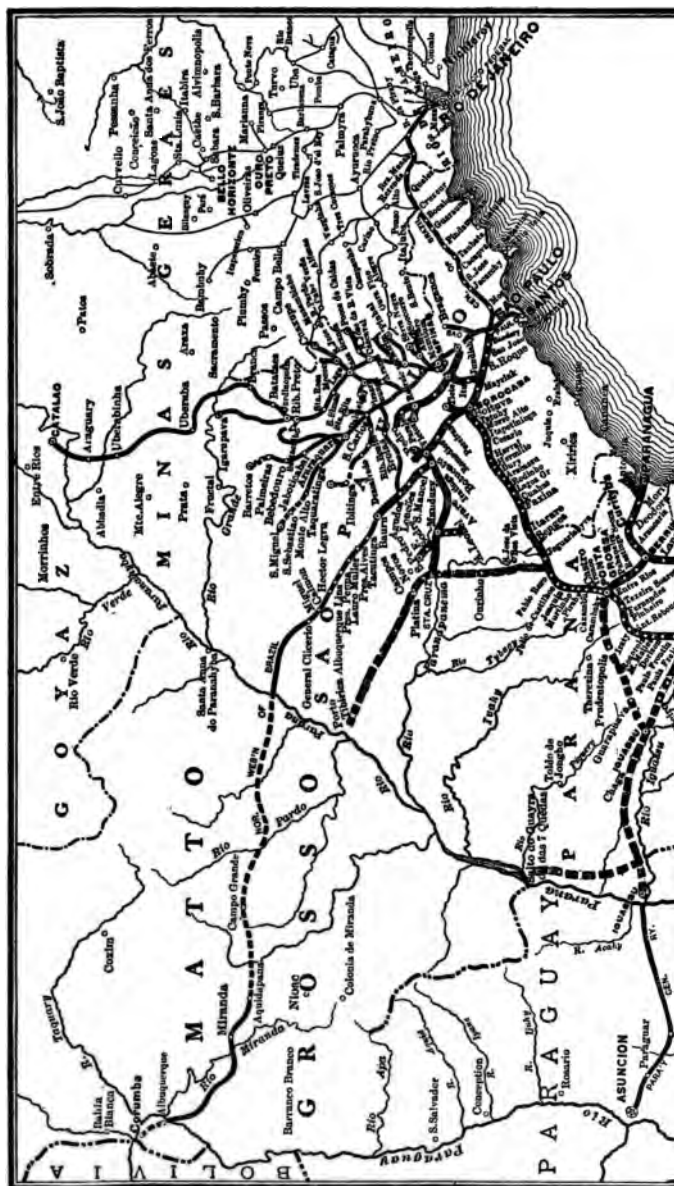
In 1910 the total receipts of railroads amounted to \$37,169,357. The total expenses were \$32,032,400. The results of working the lines were as follows:

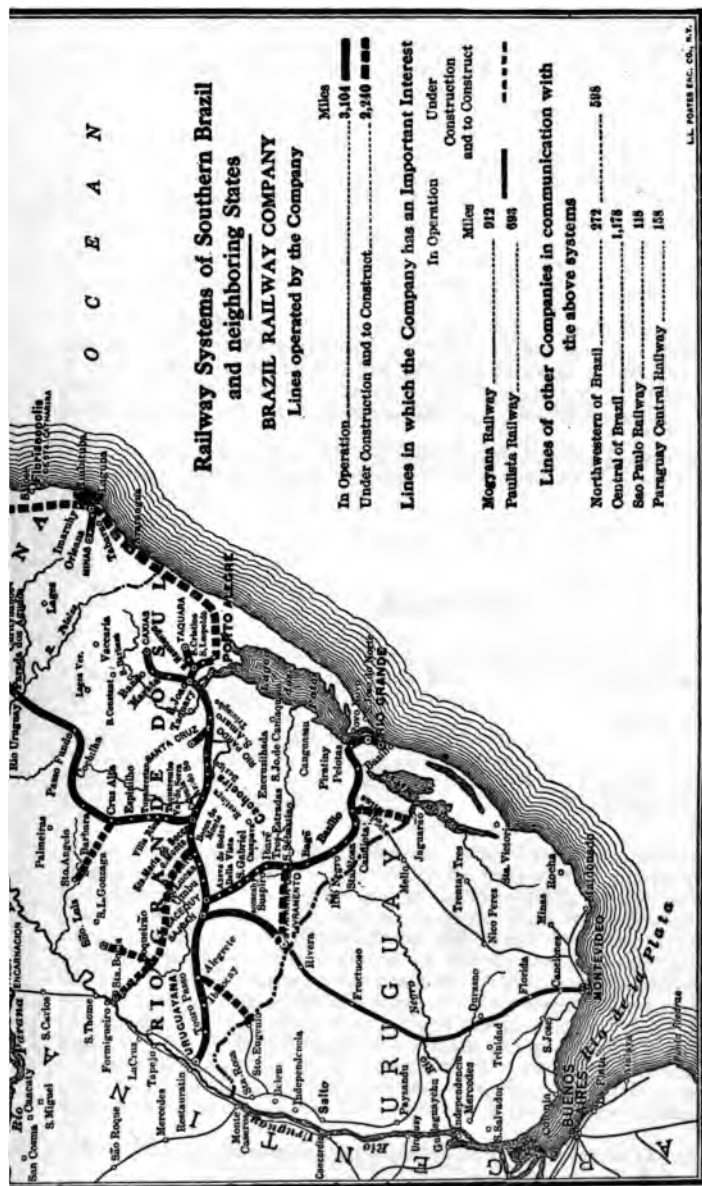
*Year 1910	Government- owned Lines	Lines not owned by Government
Total Receipts.....	\$21,174,239	\$15,995,118
Total Expenses.....	20,709,694	11,322,766
Net Profits.....	\$464,545	\$4,672,352

In 1909 (latest date obtainable) total receipts of all lines were \$37,854,379.

Miscellaneous

That railroad building in Brazil has not always been an easy matter is shown by the intricate engineering problems met with in the construction of the Leo-





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poldina Ry. and the San Paulo Ry. The former railway or system of railways was the project of an English company which took over and consolidated a number of lines (including the Maua-line built in 1854, one of the oldest railways in South America). The lines were, at the time they were taken over by the present company, rather lightly built and in poor physical condition. These were, however, rebuilt and put in excellent shape. The tremendous grades to be met with (in some places one to twelve) made necessary the using of the rack system, "adhesion traction," the "switchback," loops, horse-shoe curves and other means to handle the traffic. Upwards of 75% of the mileage has been laid along the sides of the hills and mountains, necessitating a vast amount of deep and wide cuttings. This portion of the mileage is a succession of twists and turns; other portions are built through land subject to frequent floods, particularly the country adjacent to the Parahybuna River.

The San Paulo Ry. cost a vast sum per mile to build, but the end justified the means. The 86½ miles of main line earned last year well in excess of \$100,000 per mile (exceeding the per mile earnings of the Pittsburgh & Lake Erie in the U. S. and the Panama R. R.), and the entire system including the metre gauge Bragantina Section earned over \$75,000 per mile.

It is now possible to go by rail from Rio de Janeiro, Brazil, to Monte Video in Uruguay, and to Buenos Ayres, and it will soon be possible to reach Asuncion the capital of Paraguay.

Brazil Ry.

The Brazil Ry. was incorporated in Maine in 1906, to own and operate a system of railways in the Republic of Brazil. The capital stock is authorized to the amount of \$60,000,000, as follows:

	Authorized	Issued
6% Preferred Shares of \$100 each (of which 150,375 are Cumulative Non-Participating and 49,625 Non-Cumulative Participating.....	\$20,000,000	\$20,000,000
Common Shares of \$100 each.....	40,000,000	32,000,000

The Cumulative and the Non-Cumulative Preferred Shares confer on the respective owners thereof the right to preferential cumulative and non-cumulative dividends respectively at the rate of 6% per annum in each fiscal year of the Company. The dividends on the Cumulative Preferred Shares are payable in priority to dividends on the Non-Cumulative Preferred Shares. After payment of a 6% dividend on the Common Shares in any year the holders of the Non-Cumulative Preferred Shares have the right to participate equally and *pro rata* with the holders of the Common Shares in respect of any further dividends for such year. Upon the liquidation of the Company the holders of the Preferred Shares are entitled to a preference in any distribution of assets to the extent of the par value of the Preferred Shares, and in the case of the Cumulative Preferred Shares to any dividends accumulated and unpaid thereon, all as more fully specified in the By-laws of the Company.

Dividends at the rate of 6% per annum are being paid on the preferred stock.

The bonds and debentures outstanding December 31, 1912, were as follows:

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	Authorized	Sold
4½% First Mortgage 60-year bonds.....	£15,000,000	£10,019,074
4½% bonds (French Series).....	Fr. 86,500,000	Fr. 86,500,000
5% 50-year Debentures (due 1957).....	\$5,000,000	\$1,510,500
5% Convertible Debentures.....	£2,000,000	£2,000,000

During 1912, £2,527,443 of the above 4½% First Mortgage 60-year bonds were sold as against £3,022,380 bonds sold in 1911. The maturity date of the Sterling bonds is 1969.

The £2,000,000 5% convertible Debentures were issued in 1912. They mature 1922.

An additional £2,005,000 4½% First Mortgage bonds and \$1,000,000 5% 50-year Debentures, were, on December 31, 1912, pledged as part collateral for certain Loans and Guarantees.

The lines in Southern Brazil, directly operated by the company, constituted on December 31, 1912, 3128 miles of road. About 2000 additional miles of road were projected or under construction, a portion of which mileage has since been completed. The lines extend from Sao Paulo, through the states of Sao Paulo, Parano, Sta. Catharina and Rio Grande Do Sul. Lines are also in operation to the ports of Paranagua, Sao Francisca, Porto Alegre and Rio Grande Do Sul and a number of branch lines are in operation or are being constructed. A line has been constructed to the frontier with Uruguay, where connection is afforded with the lines of the Central of Uruguay Ry., allowing through traffic to Montevideo.

Subsidiary Railway Lines.

The Brazil Ry. also controls the Paulista Ry. (about 715 miles) and the Mogyana Ry. (997 miles). See list of securities owned by the Brazil Ry. in a later paragraph. The Paulesta Ry. is located in the central portion of the State of Sao Paulo, while the Mogyana Ry. is located in Northern Sao Paulo and in the State of Minas Geraes.

The earnings of the various lines in Southern Brazil directly operated by the Brazil Ry. for 1913, 1912 and 1911 were as follows:

	1913	1912	1911
Gross Receipts.....	\$14,305,665	\$13,057,690	\$11,714,019
Working Expenses.....	9,050,665	7,483,895	6,610,711
Net Receipts.....	5,255,000	5,573,795	5,103,308
Mileage operated.....		3128 miles	3128 miles
Ratio of Expenses to Gross.....	63.3%	57.3%	56.4%
Ratio of Expenses to Gross, 57.3%.			

Note: The statistics above were rendered in the annual report of the company, expressed in Brazilian Currency. The ratio of 33½c. per 1000 Reis is here used.

During the year 1912, new rail was laid on 158 miles of road; bridges strengthened; grades reduced; 500,000 ties and new ballast placed in the road; also 38 locomotives, 127 passenger train cars and 1300 freight cars acquired.

The earnings of the Paulista Ry. for 1912 and 1911 were as follows (33½c. per 1000 Reis):

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	1912	1911
Gross Receipts.....	\$10,319,480	\$9,045,100
Working Expenses.....	4,788,239	3,970,459
Net Receipts.....	5,531,241	5,074,641
Mileage Operated.....	715 miles	715 miles
Ratio of Expenses to Gross.....	46.4%	43.9%

Dividends of 12% were paid from the Surplus Earnings for 1912 and 1911.

The earnings of the Mogyana Ry. for 1912 and 1911 were as follows (33½c. per 1000 Reis):

	1912	1911
Gross Receipts.....	\$8,130,377	\$6,935,764
Working Expenses.....	4,425,073	3,968,522
Net Receipts.....	3,705,304	2,967,242
Mileage Operated.....	997 miles	941 miles
Ratio of Expenses to Gross.....	54.4%	57.2%

Dividends of 10% per annum were paid from the Surplus Earnings for 1912 and 1911.

The Gross Receipts for 1913 of the above controlled lines were \$19,233,000, and the Net Receipts were about \$8,725,000, comparing with the above combined Gross and Net Receipts over 1912 of \$18,449,857 and \$9,213,543.

Port Enterprises

The Brazil Ry. controls the Port of Rio de Janeiro Co., which company owns wharves, etc. in Rio de Janeiro and has acquired some valuable plots of land, on which warehouses have been erected, and through a Brazilian subsidiary company is constructing large cold storage depots. The results of working the lease for 1912 were as follows: Gross, \$2,055,304; Net, \$257,270.

The Brazil Ry. is also constructing a Port at Rio Grande do Sul (to be completed in 1914). This enterprise requires the completion of two great training walls 2½ miles each in length, requiring about 2,200,000 cubic yards of stone and further requiring about 10,500,000 cubic yards of dredging. The Port will be of sufficient depth to harbor vessels of considerable size.

Similar interests control the Port of Para Co. (see under Madeira-Mamore Ry.).

Lands and Colonization

The company is colonizing portions of its lands and is offering low terms to settlers. Some 468,000 acres of land were either sold or were for sale at the beginning of 1913. The land grants were estimated in 1911 to contain an area of about 6,000,000 acres, of which a large portion had been surveyed.

Through a subsidiary (the Brazil Land and Cattle Co.) cattle raising is being carried on extensively. In 1913 the area of grazing lands purchased contained 8,163,081 acres. The company at that time had about 200,000 head of native cattle and nearly 1,000 head of pure-bred imported cattle. The lands, which are well watered, are being divided into ranches, and are being fenced, etc. The company will begin to send cattle to market in 1914, and to make certain the market, are constructing jointly with Sulzberger and Sons Co., of New York, a large modern packing factory at Sao Paulo.

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A subsidiary of the Brazil Ry. (the Southern Brazil Lumber & Colonization Co.) possesses some 560,000 acres of forest lands. A large number of mills, also logging railways, etc., together with a fully equipped planing mill and box factory, have been completed. 23,000,000 feet of lumber was produced in 1912, and since May, 1913, the railway has been regularly handling this lumber, largely to the Port of Sao Francisco.

Consolidated Revenue Account.

The earnings of various railways, etc. operated or controlled have been shown on a previous page. The Brazil Ry. as the parent company for these enterprises, reported the following income for the year 1912:

Net Revenue , including (1) Interest, Dividends and Commissions and Surplus from Operations of Railways Under Lease \$4,854,094; (2) Sundry Receipts, \$112,469, and (3) Profit on Construction of Railway Lines for Account of Subsidiary Companies, \$750,098....	\$5,716,661
Charges , including (1) Interest on Bonds and Debentures, \$2,880,137; (2) Sinking Fund, \$12,481; (3) Interest and Discount on Loans and Bills, \$585,244; (4) Administration and General Expenses, \$344,145.....	3,822,007
Balance	\$1,894,654
Dividend for year on Preferred Stock.....	\$1,012,500

Of the balance, \$820,418 was appropriated to Reserve Accounts.

Securities Owned.

The Shares, Debentures and Interests in other companies, lands, buildings, leases, etc., were valued on the books of the Brazil Ry., December 31, 1912, (at cost) at \$113,897,169. Among the securities owned as of that date were the following:

	Outstanding	Owned by Brazil Ry.
San Paulo-Rio Grande Ry. shares.....	\$5,000,000	\$4,730,800
Sorocabana Ry. preferred shares.....	2,000,000	2,000,000
" " ordinary shares.....	8,000,000	7,936,000
" " First Debentures (4½%).....		£825,000
Madeira-Mamore Ry. pfd. shares....	1,000,000	*\$500,000
" " common shares. 10,000,000		*5,000,000
" " 6% bonds.....		£900,000
Uruguay Ry. stock.....	†15,000,000	†\$15,000,000
" 4½% First Mtge bonds ..		£1,150,000
Bolivia Devel. and Colonization Co..	15,000,000	\$15,000,000
	Outstanding	Owned by Brazil Ry.
Paulista Ry. shares (par about \$64).....	400,000 shares	157,783 shares
Mogiana Ry. shares (par about \$64).....	400,000 shares	107,093 shares

*Port of Para Co. owns balance of stock (see Madeira-Mamore Ry.).

†Holds large interests in five railways in Uruguay. (See Uruguay Uruguay Northern Ry., Uruguay Midland Ry., etc.)

The company also, indirectly, controlled the Antofagasta (Chili) and Bolivia Ry. until recently. The Argentine Ry. (which see) is controlled by the interests in control of the Brazil Ry.

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As of June 30, 1912, the Brazil Ry. and its subsidiaries had in service the following equipment: 444 locomotives; 574 passenger train cars, 6,622 freight and service cars.

Various securities of this company are listed on the Stock Exchanges of London, Paris, Baltimore, etc.

Brazil Great Southern Ry.

The Statistics in the annual report of the Company are rendered expressed partially in Pounds Sterling and partially in Brazilian Currency. The ratio here in used in rendering the latter into U. S. Gold, is approximately 34c. per 1,000 Reils.

Year	Avg. Miles Oper.	Gross Revenue	Year	Avg. Miles Oper.	Gross Revenue
1911	110	\$143,935 £28,787	1912	110	\$136,925 £27,385

The Gross Receipts for 1913 were approximately \$140,590 (£28,118).

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Preference.....	\$1,125,000	Debentures (6%).....	\$1,939,345
"A" Shares.....	625,000	Flood Loan Bonds (7%)....	215,000

Capitalization		Total	Per Mile
Stock.....	£350,000	\$1,750,000	\$15,909
Bonds and Debentures.....	430,869	2,154,345	19,585
Total.....	780,869	3,904,345	35,494

Fixed Charges below include \$60,290 (£12,058) Sinking Fund for Redemption of 6% Mortgage Debentures, also \$12,550 (£2,510) London Office Expenses usually included in Operating Expenses in the statements of other roads included in this book.

Income Account Year Ending June 30, 1913

Average miles operated, 110.

	Total	Per Mile
Gross Receipts (1913 about £28,118).....	\$27,385	\$136,925
Operating Expenses.....	25,901	129,505
Net Receipts.....	1,484	7,420
Other Income.....	41,118	205,590
Total Net Income.....	42,602	213,010
Fixed Charges (including for Taxes).....	42,429	212,145
Surplus.....	173	865

*Operating Expenses

Maintenance of Way.....	£8,061	\$40,304	\$366
Maintenance of Equipment and Locomotive Expenses	9,060	45,300	412
Traffic and Transportation Expenses.....	5,625	28,126	256
General Expenses.....	3,155	15,775	143

Ratio of Operating Expenses to Gross Receipts 94.5 per cent.

*Subdivision of Operating Expenses approximately correct.

Other Income above includes \$202,500 (£40,500) received from Brazilian Government for interest on Authorized Capital for year ending December 31, 1912, also \$1,405 (£281) profit on International Ferry.

Appropriation of Gross Income

	1912-13
For Maintenance and Locomotive Expenses.....	25.0%
For Traffic, Transportation and General Expenses.....	12.8%
For Fixed Charges.....	61.9%
For Surplus.....	0.3%
	100.0%

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NOTES.

The stock, Debenture Capital and bonds of this company as of December 31, 1912, was as follows:

Preference Shares.....	\$1,125,000	£225,000
"A" Shares.....	625,000	125,000
6% Debenture Stock.....	1,000,000	200,000
6% Mortgage Debentures.....	440,000	88,000
7% Flood Loan Bonds.....	215,000	43,000

No dividends are being paid on the Preference Shares, which are cumulative. The arrears of Cumulative Dividends December 31, 1912, amounted to \$1,929,375 (£385,875).

The company received in 1912 from the Brazilian Government \$202,500 as guaranteed interest.

The Brazil Great Southern Ry. operates 110 miles of main line in the state of Rio Grande Do Sul, the terminals being located (December 31, 1912) at Quarahim on the frontier of Uruguay and at Itaqui. An extension from Itaqui northward to San Borja has been practically completed and was opened for some traffic early in 1913. A company (the Quarahim International Bridge Co., Ltd.) controlled by this railway jointly with the North-western of Uruguay Ry., is building a bridge from Quarahim to an opposite point in Uruguay. The two companies guarantee that the bridge tolls shall be enough to meet the annual service for interest and sinking fund of 5½% upon the Bridge Co.'s Debenture Stock, of which £100,000 had been issued to December 31, 1912.

The Brazil Great Southern Ry. as of December 31, 1912, carried among its assets \$300,000 (£60,000) Cash or Securities and Shares and Debentures of the Brazil Great Southern Ry. Extension, Ltd., received or receivable from the company part contingent upon the completion of extension.

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Brazil North Eastern Ry.

Avg. Miles				Avg. Miles			
Year	Oper.	Gross Receipts		Year	Oper.	Gross Receipts	
1911	436	\$785,190	£157,038	1912	472	\$895,456	£179,091

Note: Gross receipts for 1913 were approximately \$942,000 (£188,400).

Stock Outstanding December 31, 1912				Debenture Stock Outstanding December 31, 1912			
Common	.....	\$1,750,000		Deb. Stock (6%)	.....	\$1,750,000	

Capitalization			
	Total		Per Mile
Stock.....	£350,000	\$1,750,000	\$3,708
Bonds.....	350,000	1,750,000	3,708
Total.....	700,000	3,500,000	7,516

Fixed Charges below include \$87,124 (£17,425) for Government Fiscalization and Lease of Line.

Income Account Year Ending December 31, 1912			
Total miles operated 472.			
		Total	Per Mile
Gross Receipts (1913, about £188,400)	£179,091	\$895,456	\$1,897
Operating Expenses	128,205	641,027	1,358
Net Receipts	50,886	254,429	539
Other Income	3,113	15,568	33
Total Net Income	53,999	269,997	572
Fixed Charges	40,218	201,091	426
*Surplus	13,781	68,906	146

Operating Expenses				
Maintenance of Way	£32,987	\$164,936	349	
Maintenance of Equipment	17,193	85,965	182	
Traffic and Transportation Expenses	59,968	299,841	636	
General Expenses	18,057	90,285	191	

Ratio of Operating Expenses to Gross Receipts, 71.6 per cent.

*This Surplus before deducting \$46,878 (£9,376) Rolling Stock Renewal and Drought Reserve Fund and \$20,000 (£4,000) Amortization Fund.

Appropriation of Gross Income			
		1912	
For Maintenance Expenses	.....	27.5%	
For Traffic, Transportation and General Expenses	.....	42.8%	
For Fixed Charges	.....	22.1%	
For Surplus	.....	7.6%	
		100.0%	
		1912	
Ton miles per mile of road	.....	15,223	
Passenger miles per mile of road	.....	21,347	

NOTES.

This company at the beginning of the year 1913 operated 472 miles of railway located in the State of Ceara, Brazil, extending from the Port of Ceara inland; 36 miles of line, known as the Nova Russas and Cajas section were opened for operation during 1912. Additional mileage was completed during 1913.

As of December 31, 1912, the company had outstanding the following capitalization:

Shares Capital (par £1)	.....	£350,000	\$1,750,000
First Debenture Stock (6%)	350,000	1,750,000

No dividends were paid on the Share Capital from the Surplus of 1912.

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Cotton and cotton products, firewood and timber, stone, tiles and bricks and live stock formed the principal commodities handled by this railway during 1912; 281,318 passengers were carried, the receipts from this source being £39,624.

At the close of 1912 the Brazil North Eastern Rys. owned 41 locomotives, 46 passenger cars and 282 freight cars.

The earnings for 1912 were somewhat affected by a strike which lasted for three weeks.

Great Western Ry. of Brazil.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1911	934	\$3,224,440	1912	1,004	*\$3,424,925
		£844,888			*£884,985

Gross Receipts for 1913 were approximately £750,000.

Stock Outstanding December 31, 1912		*Debenture Stock Outstanding December 31, 1912	
Common	\$6,250,000	Debenture Stock (6%)	\$1,581,250
Preferred (6%)	3,750,000	Debenture Stock (4%)	8,415,500

Capitalization		Total	Per Mile
Stock	£2,000,000	\$10,000,000	\$9,960
Debenture Stock	1,989,350	9,946,750	9,907
Total	3,989,350	19,946,750	19,867

Fixed Charges below include \$61,765 (£12,753) paid account of Sinking Fund, \$118,953 for Government Percentages and Fiscalization.

Income Account Year Ending December 31, 1912

Average miles operated, 1,004.

	Total	Per Mile
Gross Receipts	\$3,424,925	\$3,411
Operating Expenses	2,279,690	2,270
Net Receipts	*1,145,235	1,141
Other Income	12,425	12
Total Net Income	1,157,660	1,153
Fixed Charges	468,725	467
†Surplus	688,935	686

Operating Expenses		
Maintenance of Way	£98,167	\$490,835
Maintenance of Equipment	58,921	294,605
Traffic and Transportation Expenses	235,070	1,175,350
General Expenses	63,780	318,900

Ratio of Operating Expenses to Gross Receipts, 66.6 per cent.

*In 1911 Net Operating Revenues were (£204,459) \$1,022,295.

†This Surplus before deducting \$5,000 (£1,000) contribution to Amortization Fund.

Appropriation of Gross Income

	1912
For Maintenance Expenses	22.3%
For Traffic, Transportation and General Expenses	43.5%
For Fixed Charges	13.6%
For Surplus	20.0%
	100.0%
Ton miles per mile of road	
	1912
	42,023
Passenger miles per mile of road	45,290

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NOTES.

Dividends of 6% per annum have been paid on both the Preferred and the Ordinary Stock for a number of years. Prior to 1904 the outstanding Share Capital consisted only of Ordinary Stock of £20 par value. In 1904 each share of this class of stock was exchanged for £10 of Preferred and £10 of Ordinary Stock.

The Outstanding Capitalization December 31, 1912, was as follows:

Ordinary Shares.....	£1,250,000	\$6,250,000
Preferred Shares (6%).....	750,000	3,750,000
Permanent 6% Debenture Stock.....	306,250	1,531,250
Debentures 4%.....	*1,693,700	*8,468,500
Total.....	£3,999,950	\$19,999,750

*Of this total £10,600 (\$53,000) were redeemed during 1912 by Sinking Fund.

This railway or network of railways extends from the port of Pernambuco northward along the coast and also into the interior, reaching Parahiba, Jaragua, Natal, etc. During recent years the mileage has been greatly increased, 1,004 miles being operated at the close of 1912 as against 652 miles in 1903. The system operates in the States of Pernambuco, Alagoas, Parahiba and Rio Grande do Norte.

A concession has been obtained from the State Government of Alagoas for the construction of a line of approximately 93 miles to connect Bom Jardim on the Alagoas section of the Great Western of Brazil Ry. with the town of Jacuhype, together with a branch to Leopoldina. A subsidiary company has been formed under the title of the Alagoas & Northern Ry., and in return for a guarantee on the debenture capital necessary for the construction of the extension, the Great Western of Brazil Ry. have been allotted the Ordinary Share Capital of the new company. The concession carries with it a State guarantee of 5% on a capital of 45 contos of reis per kilometer (0.62 of a mile). The line will pass through a rich sugar cane district and it is expected that a good return will be derived from its operation.

In 1913 the capital powers of the company were increased by £500,000. The capital expenditures during 1912 were £469,209.

During 1912, 2,674,351 passengers were carried as against 2,341,511 in 1911. The freight handled consisted of 71,658 head of live stock and 1,065,715 tons of goods, among which were the following:

Sugar and Sugar Cane.....	443,416 tons
Cotton and Cotton Seed.....	111,552 "
Stone.....	97,521 "
Firewood and Timber.....	87,316 "
Sundries.....	68,697 "
Mandioca.....	33,943 "

THE RAILWAYS OF SOUTH

Leopoldina Ry.

Avg. Miles				Avg. Miles			
Year	Oper.	Gross Receipts		Year	Oper.	Gross Receipts	
1903	1412	£831,494	\$4,157,470	1908	1542	£1,206,617	\$6,033,085
1904	1423	800,032	4,000,160	1909	1542	1,215,083	6,075,415
1905	1423	1,126,167	5,630,835	1910	1585	1,318,116	6,590,580
1906	1423	1,182,825	5,914,125	1911	1625	1,365,919	6,829,595
1907	1489	1,254,557	6,272,785	1912	1651	*1,688,926	*8,444,630

*The Gross Receipts for 1913 amounted to \$9,351,855 (1,870,371).

*Stock Outstanding		Bonds Outstanding	
December 31, 1912		December 31, 1912	
Ordinary.....	\$28,453,450	†Debenture Stock (4%)....	\$22,495,300
Preference (%).....	14,226,700		
*Ordinary £5,690,690; Preference £2,845,340. †£4,495,300.			

Capitalization			
	Total	Per Mile	
Stock.....	£8,536,030	\$42,680,150	\$25,851
Debenture Stock.....	4,495,300	22,495,300	13,625
Total.....	13,031,330	65,175,450	39,476

Income Account Year Ending December 31, 1912

Average miles operated 1,651.

	Total	Per Mile	
Gross Receipts (1913, £1,870,371).....	£1,688,926	\$8,444,630	\$5,115
Operating Expenses.....	1,086,657	5,433,285	3,291
Net Receipts.....	602,269	3,011,345	1,824
Other Income.....	18,007	90,035	55
Total Net Income.....	620,276	3,101,380	1,879
Fixed Charges.....	169,497	847,485	513
Surplus.....	450,779	2,253,895	1,366

Operating Expenses			
Maintenance of Way.....	\$320,491	\$1,602,455	\$971
Maintenance of Equipment.....	192,798	963,990	584
Traffic and Transportation Expenses.....	460,298	2,301,490	1,394
General Expenses.....	113,070	565,350	342

Ratio of Operating Expenses to Gross Receipts 64.3 per cent.

*This Surplus before deducting \$100,000 (£20,000) transferred to Reserves for repairing damage to lines caused by floods. \$100,000 (£20,000) transferred to Reserve to provide Automatic Brake Equipment and \$115,000 (£23,000) transferred to Reserve for redemption of 4% Debenture Stock.

Appropriation of Gross Income		1912
For Maintenance Expenses.....		30.1%
For Traffic, Transportation and General Expenses.....		33.6%
For Fixed Charges.....		9.9%
For Surplus.....		26.4%
		100.0%

NOTES

The Preference Shares of this Company are limited to dividends of 5½% in priority to the Ordinary Shares. The full dividend is being paid.

The Ordinary Stock of which £5,820,000 (\$29,100,000) is authorized and £5,690,690 (\$28,453,450) outstanding has received dividends in recent years as follows:

	1899-00	'01 to '03	'04	'05-'06	'07	'08	'09	'10	'11	'12	'13
% yrly.	1½	3½	3	4	4½	3½	3¼	3½	2	4	4

The 4% Debenture Stock £4,495,300 outstanding has no date of maturity. It may, however, be retired at the company's option. On December 31, 1912, £314,378 (\$1,571,890) was reserved to redeem this Debenture Stock.

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The Leopoldina Ry. owns 625,001 shares of a par value of £1 each (£1,250,000 outstanding) of the Leopoldina Terminal Co., Ltd., received as consideration for the unconditional guarantee of the payment of principal and interest and sinking fund £1,250,000 (\$6,250,000) 5% First Debentures of the Terminal Co.

This Railway runs from Niteroy opposite Rio Janeiro northward through the valley of the Parahyba River, to Campos, Leopoldina, etc., with a number of branches and cross lines. There is also a line from Rio to Petropolis, a famous summer resort of Brazil. The construction of portions of this railroad were among of the engineering feats of the age, and its final successful completion and profitable operation under difficulties reflect the greatest possible credit to the management. Portions of the country traversed are extremely mountainous, with tremendous grades, while along certain parts of the line heavy floods are frequent. The railway has been constructed to meet these difficulties and to-day is one of the best properties in South America.

Madeira-Mamore Ry.

This company operates a line of railway in the far interior of Brazil. The line was constructed to bring the navigable waters of the Amazon into connection with the northern part of the State of Matto Grosso in Brazil, the



north and west of Bolivia and part of the Brazilian Acre territory. The Madeira-Mamore Ry. has a terminus at Porto Velho on the Madeira River, near the head of navigation. The railway passes around the falls which have

THE RAILWAYS OF SOUTH

hitherto made a direct route from eastern Bolivia to the Atlantic Ocean impossible, and will open up a vast tract of country, rich in rubber and other forest products, etc. The other terminus of the railway is at present at Guajara Miram which is located on the Mamore River. The Mamore River is a tributary of the Madeira River and extends in a southerly direction into the heart of the Republic of Bolivia. The Madeira River in turn flows in a northeasterly direction joining the Amazon River near Manaus. From near Guajara Miram, Brazil, the line is being extended across the Bolivian frontier, westerly to the town of Riberalta, at the point where the Beni and the Madre de Dios Rivers converge. This extension, which is to be sixty-two miles in length, will open up traffic on the Beni River which is navigable for some distance. The company is guaranteed for twenty-five years, by the Bolivian Government, 5% on the cost of construction, and also has the right to purchase a total of 9,270,000 acres of land at 1½c. (¾d.) per acre for grazing land and at 17c. (8½d.) per acre for rubber lands. About 6,000,000 acres were being marked out in 1912-13.

The \$1,000,000 preferred stock and the \$10,000,000 ordinary stock is owned one-half by the Port of Para Co. and one-half by the Brazil. Each of the controlling companies received a large amount of 6% First Mortgage 60-year bonds in payment for advances. The authorized issue of these bonds is £3,000,000 of which approximately £2,600,000 had been issued. £1,000,000 are guaranteed by the Port of Para Co. and the balance (the interest on which has been reduced to 5½%) are guaranteed by the Brazil Ry. The holder of the bonds guaranteed by the former have the right to convert them on any interest date to and including April 17, 1916, into 6% Preferred (Participating) Stock of the Port of Para Co. This latter company had outstanding December 31, 1912, \$10,500,000 (authorized \$17,500,000) Preferred Stock, \$13,000,000 (authorized \$15,000,000), Common Stock £3,600,000 5% 50-Year First Mortgage bonds, £2,484,102 5% 60-Year First Mortgage bonds (authorized £5,000,000) and \$6,919,364 loans. This company has constructed extensive Port works at Para, including the building of 6,370 feet of quay wall, 13 warehouses, an electric power house, docks, a coal depot, oil storage tanks, an office building, etc., and the dredging of a three mile channel to the depth of 30 feet.

The rental paid by this company to the Government is as follows: (1) 5% of the Gross Receipts for the first 20 years from January 1, 1912; 10% for the second 20 years and 20% during the last 20 years, the concession expiring at the end of 60 years; (2) 20% of the Surplus Net Earnings remaining after payment of the above percentage of Gross Receipts and 12% interest on the capital of the Company recognized by the Government.

The Gross Earnings for the year ending December 31, 1912, including eight months (January 1 to September 7) during which period the operation was provisional, were approximately \$1,552,056, against approximately \$706,905 in 1912. The Net Earnings for 1912 were about \$579,395. A total of about 226 miles was operated at the close of 1912, against 137 miles operated July, 1911, and against 194 miles operated February 3, 1912. The receipts from sales of rubber during the first ten months of 1913 were over £28,000 (\$140,000). For the year 1913 Gross Earnings were approximately \$1,701,335 and Net Earnings were \$812,335.

The Bolivian Development & Colonization Co., controlled by the interests controlling the Brazil Ry., is to construct a line starting from La Paz, Bolivia, where connections will be afforded with the Antofagasta (Chili) and Bolivia,

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Ry., extending to the Pacific Ocean at Antofagasta, Chili. The new railway will extend from La Paz to a point on the Beni River, probably at Puerto Brais. This will open a through trade route from Chili and western Bolivia to Manoaas, Para, the Amazon River and the Atlantic Ocean.

About 39% of the traffic of the Madeira-Mamore Ry. for 1912 consisted of rubber.

See Brazil Ry.

San Paulo Rys.

Half-Year	Avg. Miles		Gross Receipts
*1913	Oper. †134	‡\$4,972,105	£994,421
*Period from January 1, to June 30, 1913.			
†Main Line, 5 ft. 3 in. gauge, 86 ½ miles; Bragantine Section, 1 metre gauge, 47 ¾ miles.			
‡Main Line earned for the six months period \$4,863,390 (£972,678) and Bragantina Ry. \$107,465 (£21,493).			

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Ordinary.....	\$15,000,000	*Debenture Stock.....	\$10,000,000
Preference (5%).....	5,000,000	Equipment	

*£750,000, 5 ½ %; £250,000, 5 %; £1,000,000, 4 %.

	Capitalization		
	Total		Per Mile
Stock.....	£4,000,000	\$20,000,000	\$149,254
Debenture Stock.....	2,000,000	10,000,000	74,627
Total.....	6,000,000	30,000,000	223,881

Fixed Charges below include \$254,425 Depreciation in value of Investments.

Income Account Half Year Ending June 30, 1913

Average miles operated, 134.

	Total		Per Mile
	£994,421	\$4,972,105	\$37,105
Gross Receipts.....			
Operating Expenses.....	797,877	3,989,385	29,771
Net Receipts.....	196,544	982,720	7,334
Other Income.....	24,896	124,480	929
Total Net Income.....	221,440	1,107,200	8,263
Fixed Charges.....	100,718	508,590	3,758
*Surplus.....	120,722	603,610	4,505

Operating Expenses

	£176,885	\$884,425	\$6,600
Maintenance of Way.....			
Maintenance of Cars.....	138,686	693,430	5,175
†Traction Power.....	212,333	1,061,665	7,923
Traffic Expenses.....	196,402	982,010	7,328
General Expenses, etc.....	73,571	367,855	2,745

Ratio of Operating Expenses to Gross Receipts 80.2%

*£280,971 (\$9,404,855) balance from preceding Half-year after payments of dividends, etc., was carried forward and was applicable for dividends.

†Includes expenses of maintaining and operating locomotives.

Appropriation of Gross Income

	*1913
For Maintenance and Traction Power Expenses.....	51.8 %
For Traffic and General Expenses.....	26.5 %
For Fixed Charges.....	9.9 %
For Surplus.....	11.8 %

100.0 %

*Six months only (January 1 to June 30, 1913).

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The capitalization of this company as of June 30, 1913, was as follows (all authorized securities were outstanding):

Ordinary stock	£3,000,000	\$15,000,000
Preference stock (5%)	1,000,000	5,000,000
Debenture Stock (5½%)	750,000	3,750,000
" " (5%)	250,000	1,250,000
" " (4%)	1,000,000	5,000,000
Total capitalization	£6,000,000	\$30,000,000

After paying all interest charges on the Debenture stock and the dividend on the Preference stock, the company declared from the balance of earnings a dividend of 14% on the Ordinary stock. This is the regular rate of dividend.

The balance sheet as of June 30, 1913, showed Cash, Stores, Bills Receivable and other Current Assets (including Investments with a market value of £1,215,852) to the total of \$12,689,855 (£2,537,971), as against Current Liabilities totalling \$2,402,475 (£480,495). There was a Reserve Fund of \$10,088,415 (£2,017,685) and an Income Tax Reserve of \$291,275 (£58,255).

The main line of the San Paulo Ry. is operated between Santos, via San Paulo to Jundiahy, 86½ miles (gauge 5 ft. 3 in.), with a branch line (metre gauge) connecting the main line with the town of Bragantina (47¼ miles). A metre gauge branch from Atibaia to Piracaia (19 miles) was under construction in September, 1913. The line from Santos to Sao Paulo and beyond is entirely double-tracked.

The per mile earnings of this company are the greatest of any steam railway line in South America and probably of any railway in either of the American continents. Coffee is the principal product handled, being carried from the interior to the port of Santos, which is the nearest shipping point to the important city of Sao Paulo (population over 300,000). Santos, the port, has a population estimated at 75,000 and Jundiahy 20,000.

Santos bears the distinction of being the greatest coffee port in the world, possesses excellent docks, electric lighting plants and street railways and is a thoroughly modern city. Sao Paulo is the second largest city in Brazil and is of great commercial importance. There are some 500 factories in the city with a working capital of \$20,000,000 on which the average dividend earned was 10% in 1911.

The San Paulo Ry. enjoys a monopoly of the trade between Sao Paulo and Santos. The Government may purchase the line in 1927 under certain conditions. The railway was originally worked under a Government guarantee of 7% on £2,650,000 under this agreement which has since been cancelled (there is no longer any guarantee). The company retained profits up to 8% on the above amount, all of the balance being divided between the Government and the railway.

AND CENTRAL AMERICA

State of Bahia Southwestern Ry.

This company was incorporated September 11, 1908, to acquire a concession granted by the State of Bahia, Brazil, for the construction of a railway in that State, with a total length of 224 miles, extending from Ilheos to Conquista, while several branches are building or projected. The enterprise carries a State Government guarantee.

The company had outstanding December 31, 1912, the following capital:

	Authorized		Outstanding	
Stock (Par £1).....	*£200,000	*\$1,000,000	£180,757	\$1,903,785
First Mortgage 6% bonds (Par £20).....	1,350,000	6,750,000	536,680	2,683,400

*Authorized Stock increased to £300,000, July 10, 1913.

For the period from March to December, 1912, the State of Bahia advanced the company as guaranteed interest £17,928 (\$89,640). The Receipts for the same period as per Accounts from Bahia were £21,710 (\$108,550) and the Expenses £21,408 (\$107,040).

The Gross Traffic Receipts for the calendar years 1912 and 1913 were approximately as follows:

1912.....	\$138,777
1913.....	161,343

The annual report of the company for 1912 stated that £450,000 had been expended on its property from the date of incorporation to December 31, 1912.

The main line of this railway was completed from Ilheos to Almada, 20 miles, in June, 1910, and to Itabuna, 17 miles beyond in September, 1911. Additional mileage has since been completed.

Cocoa forms a large portion of this company's freight traffic.

THE RAILWAYS OF SOUTH

COLOMBIA.

Colombian Republic.

The following statistics showing the traffic and gross earnings of the principal Colombian railways for 1912 are mostly taken from a recent U. S. Consular trade report:

Railways	Mileage operated.	Passengers.	Freight tonnage.	Gross earnings.
Antioquia.....	88	75,010	33,410	\$517,696
Amaga.....	8	709,758	10,400	97,971
*Barranquilla....	17	186,491	103,280	310,945
*Col.Ry.&Nav.Co.	65	36,794	46,253	215,407
Cucuta.....	44	58,914	22,802	517,209
Tachira.....	..	87,520	1,780	31,149
Cauca.....	53	11,945	24,704	186,324
*La Dorada.....	71	107,741	72,677	445,220
*Colombian Nat..	82	103,540	45,579	500,174
Colombian North..	37	437,451	39,070	261,326
La Sabana.....	26	381,957	76,662	283,500
Southern.....	18	97,022	36,947	74,899
*Santa Marta....	92	180,252	135,698	509,716

Railways designated (*) are described elsewhere.

Note: The mileage given above is only approximately correct.

The total railway mileage completed at the close of 1912 was approximately 645 miles. No trunk lines have as yet been established, nor is there any network of connecting lines. The Republic is extremely rugged in its formation, three mountain ranges crossing it, which makes railroad construction very difficult. The area of the country is 438,436 square miles, which is more than equal to the combined area of the New England States, the Middle Atlantic States, and the South Atlantic States, West Virginia included. The population in 1912 was 5,472,604. Colombia's vast resources, both mineral and agricultural, are almost undeveloped, and the future of the country should be extremely bright.

A brief summary of several of the railroads not mentioned on the Table Pages follows:

Antioquia R. R.—This railroad was projected in the 80's, and is designed to run from Puerto Berrio on the Magdalena River, the Republic's principal highway of commerce, to Medellin, (population about 70,000), the capital of the State of Antioquia, about 125 miles. This railway, in which a large amount of German capital has been invested, is now practically completed. Its earnings at present equal those of any railroad in the country, and will be greatly increased upon its reaching Medellin.

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The Amaga Ry. is a short line being constructed to join Medellin with Caldas, Amaga and the Cauca River.

The Barranquilla Ry. & Pier Co.'s property is described elsewhere. This little railway forms part of the route usually followed in order to reach Bogota, the capital, and other important points in the interior. The most frequented routes from the Carribbean ports to Bogota are either the Barranquilla Ry. from Puerto Colombia to Barranquilla, or the Colombia Ry. & Navigation Co.'s Ry. (formerly the Cartagena Ry.) from Cartagena to Calamar. The mouth of the Magdalena River is not navigable. From Barranquilla or from Calamar the Magdalena River is used to La Dorada, from which point the railway bearing that name (see Dorada Ry.) has to be taken to Puerto Beltran, to avoid a succession of rapids in the river. Then a river voyage is again necessary to Giradot, where change is made to the Colombian National Ry. (see that company) which is used to Facatativa. At that point junction is afforded with the Sabana Ry. running to the capital, Bogota. This explains the reason for the construction of the railways just mentioned. The present journey from the Carribbean Sea to Bogota requires fully ten day's time. The Pacific Coast is much nearer that city, but the three interjacent ranges of the Andes make the construction of a railway between the Coast and the Capital an extremely costly enterprise.

The Cucuta Ry. has outstanding about \$1,800,000 stock, all, or practically all of which is held in Colombia. Dividends have been paid on this stock as follows: 1909, 1¼%; 1910, 3%; 1911, 3¼%; 1912, 4¼%; 1913, 4% and upwards. This company also has outstanding about £21,600 of an original issue of £120,000 6% Debentures (listed in London), the balance of which has been retired through a sinking fund. The line operates from the City of Cucuta, in Santadar (near the Venezuelan frontier), to Villamizar, the head of navigation on the Zulia River, which empties into Lake Maracaibo in Venezuela. There is also an extension from Villamizar to Tachira. Traffic on this railroad was virtually suspended from 1906 to 1908 inclusive, owing to the closing of the Zulia River by the Government of Venezuela.

The Cauca, or the Pacific Ry., operates from the port of Buenaventura inland, to Cali (about 103 miles). The construction of this road, but recently completed, necessitated a large amount of tunneling, bridging, etc. The valley of Cauca, which is reached by the railway, contains large deposits of coal and other minerals. The importance of this line, in which it is said American capital is invested, will be greatly increased upon the completion of the Panama Canal. The equipment used by this railroad was largely purchased in the United States.

The Sabana Ry. is, as stated, part of the through route from the Magdalena River to Bogota. Its gross earnings exceed \$10,000 per mile, and it is an important little road.

The Colombian Southern Ry. extends from Bogota southward to Sibate, through an agricultural country. It has recently been purchased by the Colombian Government and its corporate existence has ceased.

The Colombian Northern Ry. the \$900,000 (£180,000) 5% Debentures and \$1,500,000 (£300,000) stock of which are owned in England, has paid dividends in recent years approximately as follows: 1912-13, 4%; 1911-12, 3%; 1910-11, 2%; and 1907-8 to 1909-10, 2½% yearly. This line runs from Bogota northward to Nemocon, and is to be extended to Chiquinoquira, about 64 miles further. At Chiquinoquira it is expected to meet the Great

THE RAILWAYS OF SOUTH

Northern Central Ry., a line now running from Puerto Wilches on the Magdalena River to Bucaramanga. If plans materialize and if sufficient capital is raised, this latter road is to be built to Chiquinoquirá. The Great Northern Central Ry. is an English company, and the concession for the building of the line was granted in about the year 1896.

There is another railway in the Republic—**The Tolima Ry.**, running from Giradot (on the Magdalena River) to Espinal. This is a government enterprise.

Mention has heretofore been made of the Colombia Ry. & Navigation Co., successor to the Cartagena Ry. The latter company, the control of which is held in Great Britain, met with financial difficulties and had to be reorganized. The line is an important one, and, it is expected, will develop large earnings in the near future.

The Congress of Colombia in November, 1913, authorized a railway from the Gulf of Darien to Medellin in Colombia. The administration of Gen. Rafael Reyes granted a concession to Mr. Henry G. Granger, C. E., and his American associates for constructing this line, and Mr. Granger's company began the work of establishing a port on the Gulf of Darien, which he called Ciudad Reyes, and constructed a short stretch of track from the sea into the swampy lowlands, but the company ceased all operations in 1908.

The Government is to make a preliminary survey, at its own expense, and that the Department of Antioquia, of which Medellin is the capital, shall send engineers to accompany those named by the Government in conformance with an ordinance adopted by that Department in 1913.

On completion of the railway from Puerto Berrio, on the Magdalena River, to Medellin, if the Department of Antioquia decides to construct the road to the Darien Gulf, the National Government will grant that Department a subvention of \$25,000 per mile for the mileage constructed, and will also cede in the Department mentioned in the region through which the road may pass, 250 acres of public land for each kilometer (0.62 mile) constructed. The work may be commenced at either end of the line.

Should the Department of Antioquia not make use of this privilege the National Government is authorized in conjunction with the Department to make a contract with a company that may be formed therefor, or the National Government may build the road itself.

A similar subvention is to be granted to the proposed line (the Tunja Ry.) from Tunja to the Magdalena River, provided this line be constructed with a gauge not less than a yard wide.

A preliminary survey is being made now for a firm who is supposed to represent the same British syndicate that built the Colombian National Ry., of a 100-mile line across the savannahs from Bogota to Tunja. The other line from Tunja to the Magdalena would probably pass near Bucaramanga and follow the surveys of the partly constructed Great Northern Central Ry. It is said that this line can be built on a maximum 2% grade from the Magdalena River to Bogota.

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Barranquilla Ry. & Pier Co.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1911-12	17	\$278,007 £55,601	1912-13	17	\$351,003 £70,201

Stock Outstanding June 30, 1913		Debenture Stock Outstanding June 30, 1913	
Common.....	\$1,000,000	Debenture Stock (6%).....	\$1,000,000

Capitalization		Total	Per Mile
Stock.....	£200,000	\$1,000,000	\$58,823
Bonds.....	100,000	500,000	29,412
Total.....	300,000	1,500,000	88,235

Fixed Charges below include \$10,000 (£2,000) Depreciation on Investments.

Income Account Year Ending June 30, 1913

Average miles operated 17.

	Total	Per Mile
Gross Receipts.....	£70,201 \$351,003	\$20,647
Operating Expenses.....	31,921 159,603	9,388
Net Receipts.....	*38,280 191,400	11,259
Other Income.....	3,141 15,705	924
Total Net Income.....	41,421 207,105	12,183
Fixed Charges.....	11,125 55,625	3,272
*Surplus.....	30,296 151,480	8,911

Operating Expenses

Maintenance of Way.....	£6,658	\$33,289	\$1,958
Maintenance of Equipment.....	3,811	19,054	1,121
Traffic and Transportation Expenses.....	15,416	77,082	4,534
General Expenses.....	6,036	30,178	1,775

Ratio of Operating Expenses to Gross Receipts 45.5 per cent.

*As against £38,725 as shown in annual report of the Company, see explanation below.

Other Income above includes \$2,225 (£445) difference between the Net Earnings as shown in the annual report of the Company and the Net Earnings as shown above. In this table the rate of \$1.00 U. S. Gold to \$100 Colombian currency is used and in the annual report a slightly different basis. In Colombian currency the Gross Receipts for 1912-13 were \$35,100,265, against \$27,800,669 for 1911-12.

Appropriation of Gross Income

	1912-13
For Maintenance Expenses.....	14.3%
For Traffic, Transportation and General Expenses.....	29.2%
For Fixed Charges.....	15.2%
For Surplus.....	41.3%
	100.0%

NOTES

This company operates a line of railway from Savanilla to Barranquilla, about seventeen miles. The former city is an important port on the Caribbean Sea, while Barranquilla is the port for the Magdalena River, the principal highway of commerce for Colombia. As the Magdalena River is not navigable at the mouth this railway operating as it does between the two ports, is, though a small line, of considerable importance. This Company also owns a valuable pier, which is being enlarged and extended in order to meet the ever increasing traffic.

The Republic of Colombia had the right to purchase the property of this company "at a fair valuation," in June, 1913, but did not exercise that right. In June, 1923, the Government may purchase the property "at a fair valuation, less 20%," and in 1933, "at a fair valuation, less 40%."

The Barranquilla Ry. & Pier Co. had outstanding June 30, 1913, \$1,000,000

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(£200,000) stock divided into 20,000 shares of £10 each, (see following paragraph), also \$500,000 (£100,000) Debenture Stock.

Dividends of 5% each were paid on the stock in November, 1912, and in November, 1913. In addition to the 5% dividend paid in November, 1913, a special bonus of 25% (£50,000) stock was paid to the shareholders. In addition, \$250,000 (£50,000) and \$50,000 (£10,000) were appropriated to Reserve Account and Renewal Account.

On June 30, 1913, the balance sheet showed Current Assets, Stores, Investments, etc., £96,878, and Current Liabilities, £9,170.

The Gross Receipts of the Company, as shown in the annual report of the Company, included \$1,629,133 Colombian (equal to \$16,291 American) account of Pier dues. The rate of exchange between Colombia and the United States is about \$100 Colombian to \$1 American Gold.

Colombian National Ry.

Receivers were appointed for this company in 1912, and remained in office until June 24, 1913.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1910	86	\$308,215	1912	86	*\$500,174
1911	86	\$382,176			*£100,035

*Gross Earnings for 1913 were approximately \$635,000 (£127,000).

Stock Outstanding December 31, 1912	Bonds Outstanding December 31, 1912
Common.....\$4,500,000	*Debentures (6%).....\$7,400,000

*Interest on a majority of these Debentures is paid by the Government of Colombia under guaranty agreements (see Notes). The Balance Sheet as of December 31, 1912, showed \$574,918 (£114,984) Debenture Interest unpaid and accrued. On December 31, 1912, \$1,928,443 (£385,689) was due the Government of Colombia (see Notes).

Capitalization	Total	Per Mile
Stock.....	£900,000	\$4,500,000
Debentures.....	1,480,000	7,400,000
Total.....	2,380,000	11,900,000

Fixed Charges below include \$444,000 (£88,805) for interest on Debentures. This interest was not actually paid by the company but was paid by the Government. This sum remains due the Government with compound interest at 6% per annum.

Income Account Year Ending December 31, 1912

Average miles operated, 86.			
	Total		Per Mile
Gross Receipts.....	£100,035	\$500,174	\$5,816
Operating Expenses.....	52,799	268,994	3,070
Net Receipts.....	47,236	*23,680	2,746
Other Income.....	31	154	2
Total Net Income.....	47,267	236,334	2,748
Fixed Charges.....	109,919	549,593	6,391
Deficit.....	62,652	313,259	3,643

Operating Expenses			
Maintenance of Way.....	£19,277	\$96,383	\$1,121
Maintenance of Equipment.....	6,685	33,423	389
Traffic Expenses.....	16,324	81,623	949
General Expenses and Administration.....	10,513	52,565	611

Ratio of Operating Expenses to Gross Receipts, 52.8 per cent.

*As compared with (£17,881) \$89,405 in 1911.

Appropriation of Gross Income

	1912
For Maintenance Expenses.....	26.0%
For Traffic, Transportation and General Expenses.....	26.8%
For Fixed Charges.....	109.8%
For Surplus.....	Deficit

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NOTES

No dividends have ever been paid on the \$4,500,000 (£900,000) ordinary stock (par £1) of this Company.

The First Mortgage and Second Mortgage 6% Debentures are callable at 110 and are payable at 110 in case of liquidation. They are secured by a first and second charge on the property of the company. \$1,000,000 (£200,000) and \$2,000,000 (£400,000) respectively of these two classes of Debentures are outstanding, including £300,000 Second Debentures issued to contractors. The Government owns a large majority of these Debentures (see below), also \$1,500,000 (£300,000) or one-third of the ordinary stock.

The Third Mortgage 6% Debentures, \$2,150,000 (£430,000) of which are outstanding, are a third charge on the property and are secured by a Government guarantee of 3% of the customs receipts of Colombia. These Debentures are payable at par in case of liquidation. They were sold in 1908, being offered for subscription at 81. A Sinking Fund is to be provided out of Net Income of the Company.

The Fourth Mortgage 6% Debentures, \$2,250,000 (£450,000) of which are outstanding, are secured by 4% of the customs receipts of Colombia, any deficiency to be made up from Revenues of the Republic. These bonds were offered at 80.

The coupons due July, 1910, on the Third and Fourth Mortgage Debentures were not paid until January, 1911. Since that time payments have been made when due in all instances from Government guarantees. The Company having been unable to meet interest on the First and Second Debentures, Receivers were appointed early in 1912. The Government took the matter up and settled with the Second Debenture-holders, whereupon both Receivers were discharged June 24, 1913. The Republic of Colombia has offered its own bonds in exchange for these Debentures. To October 1, 1913, about 80% of the Debentures had been exchanged. The Colombian National Ry. has notified the Government of its ability to undertake in future the payment of interest on the First and Second Debentures. It is expected that the Railway will soon be able to relieve the Government of the payment of the £52,-800 annual interest on the Third and Fourth Debentures.

On December 31, 1912, the Railway Co. owed the Colombian Government £385,688 as against £290,103 December 31, 1911, the increase being due to the payment by the Government of interest on Debentures under their guarantees (£88,000 with compound interest at 6%). The balance sheet of the railway also showed £114,984 Debenture Interest Unpaid and Accrued.

The Company upon the completion of the railway was given a land grant of about 123,000 acres.

The Colombian National Ry. extends from a junction with the Sabana Ry. running from Bogota to the Port of Girardot on the Magdalena River (86 miles). The two railways are of a different gauge.

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Colombia Ry. & Navigation Co.

(Successor to the Cartagena Ry.)

NOTES.

This company has been organized as the successor to the Cartagena Ry. Co. receivers for which were appointed in April, 1912. The Colombia Ry. & Navigation Co. is to create new 6% Prior Lien Bonds to the amount of £250,000; of which £125,000 are to be issued immediately, to be a first charge on the properties of the old company's (the Cartagena Ry.) railroad and steamship lines. Holders of the old Debentures of the steamship lines (Colombia Navigation Co.) have agreed to give up their first charge in favor of the new Prior Lien Debentures, but are on the other hand to become a second charge (also subject to the new Prior Lien Debentures) on certain properties of the railway. The railway Debentures will continue to bear interest at 5% per annum as before, but interest is to be dependent on income and is to rank as to 2% immediately after the Navigation Lines' Debenture interest and 3% after provision has been made for a renewal and repair fund of £5,000 per annum, and for the Navigation Lines' Debenture redemption fund of £6,399 which comes into operation in 1918; interest is to be paid in cash as far as the profits allow, and the balance by the issue of deferred interest warrants, and such deferred interest warrants are also to be issued for arrears up to March 31, 1913, and for the coupon due September 30, 1913. The warrants are redeemable out of profits. A redemption fund to retire the Cartagena Ry. Debentures will begin to operate from July, 1919, although if profits are sufficient after all interest, repairs, renewals, etc., have been disposed of, one-half of all profits after all charges, (interest, sinking fund, renewals, etc.) have been disposed of will go to the Railway Debenture renewal fund and one-half to the shareholders, whose £750,000 stock will not be otherwise affected by the reorganization.

The railway is about 65 miles in length and extends from the port of Caratega on the Caribbean Sea to Calamar on the Magdalena River. The Company has a concession from the government extending until 1994, although the government has the right to purchase the property after 1944 under certain conditions. The company owns docks and terminals at Cartagena which are of considerable value. The steamer lines are operated on the Magdalena River.

Gross earnings for several years (including steamer lines) follow:

1908.....	£133,298	\$666,490
1909 (6 months).....	59,458	277,290
1909-10.....	269,243	1,346,215
1910-11.....	277,223	1,386,115
1911-12.....	278,870	1,394,350
1912-13.....	333,944	1,669,720

The Capitalization of the new company will consist of: £125,000 6% Prior Lien Debentures; £750,000 (Railway) 5% (Income) Debentures; £750,000 stock, and the Steamer Lines Debentures.

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Dorada Extension Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1911	71	\$355,025 £71,005	1912	71	*\$445,220 £89,044

Note: Gross Receipts for 1913 were \$514,000 (£102,800).

Stock Outstanding December 31, 1912		Debenture Stock Outstanding December 31, 1912	
Ordinary	\$1,750,000	Debenture Stock (6%)	\$1,702,500

Capitalization		Total	Per Mile
Stock	£350,000	\$1,750,000	\$24,648
Debenture Stock	340,500	1,702,500	23,979
Total	690,500	3,452,500	48,627
Fixed Charges below include \$10,183 (£2,037) paid account of Sinking Fund and \$5,000 (£1,000) Redemption of Honda Municipal Subvention.			

Income Account Year Ending December 31, 1912

Average miles operated 71			
	Total		Per Mile
Gross Receipts (1913, £102,800)	£89,044	\$445,220	\$6,271
Operating Expenses	34,655	173,276	2,441
Net Receipts	54,389	271,944	3,830
Other Income	1,770	8,853	125
Total Net Income	56,159	280,797	3,955
Fixed Charges	23,751	118,755	1,673
*Surplus	32,408	162,042	2,282
Operating Expenses			
Maintenance of Way	£10,332	\$51,660	\$728
Locomotive Department	7,541	37,707	531
Traffic, Transportation and Telegraph Expenses	9,593	47,965	676
General Expenses	7,189	35,944	506

Ratio of Operating Expenses to Operating Revenues 38.9 per cent.

*This Surplus before deducting \$50,000 (£10,000) set aside to meet Discount on Second Mortgage bonds to be issued at 92½ (see Notes), \$40,000 (£8,000) credited to Rolling Stock Renewal Account and \$10,000 (£2,000) credited to Reserve.

Appropriation of Gross Income

	1912
For Maintenance and Locomotive Expenses	19.7%
For Traffic, Transportation and General Expenses	18.5%
For Fixed Charges	26.1%
For Surplus	35.7%
	100.0%

NOTES

The Ordinary Stock of this company, of which \$1,750,000 (£350,000) is authorized and outstanding, received in 1913 from the earnings for the calendar year 1912 a dividend of 4% as against 2½% paid from the previous year's earnings. The par value of the stock is £10.

The Debenture Stock of the company bears interest at the rate of 6% per annum. \$1,750,000 (£350,000) of this Debenture Stock is authorized and outstanding of which \$57,500 (£11,500) had been redeemed by a voluntary Sinking Fund prior to June, 1913.

The Stockholders have ratified an issue of £150,000 Second Mortgage bonds, bearing 6% interest and repayable in five years. These bonds have been sold at 92½, the proceeds to be used to build an aerial ropeway between Mariquita, a station on the Dorada Extension Ry., and Manizales, a town of some 34,000 inhabitants and the centre of a large coffee growing district. The company has authorized the setting aside of \$50,000 (£10,000) from the Surplus of 1912,

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to meet the discount on this Debenture issue. The company which is to construct the new line is to be known as the Dorada Ry. (Ropeway Extension) Ltd.

This railway was constructed in order to afford a means of transportation around the rapids of the Magdalena River, which rapids make navigation impossible for some distance.

Santa Marta Ry.

Year	Average Miles Operated	Gross	Surplus
*1912	†92	\$489,630	\$4,545

*Year ending September 30; annual report for year ending September 30, 1913, not received to date of going to press.
†80 miles, of which is owned by the company.

Stock Outstanding Sept. 30, 1912		Bonds Outstanding Sept. 30, 1912	
*Ordinary.....	\$1,000,000	Debentures (6%).....	\$952,000
Preferred (7%).....	795,800		
* \$250,000 (£50,000) of the above Ordinary Share Capital does not appear on the Company's Register pending the completion of certain legal formalities.			

Capitalization.		Total	Per Mile
Stock.....	£359,160	\$1,795,800	\$19,519
Bonds.....	190,400	952,000	10,348
Total.....	549,560	2,747,800	29,867

Income Account Year Ending September 30, 1912

Average miles operated, 92		Total	Per Mile
Gross Receipts.....	£97,926	\$489,630	\$5,322
Operating Expenses.....	80,512	402,560	4,376
Net Receipts.....	17,414	87,070	946
Total Net Income.....	17,414	87,070	946
Fixed Charges.....	16,506	82,530	897
*Surplus.....	908	4,540	49

Operating Expenses			
Maintenance of Way.....	£29,274	\$146,370	\$1,591
Maintenance of Equipment.....	7,715	38,575	420
Traffic and Transportation Expenses.....	33,108	165,540	1,799
General Expenses.....	10,415	52,075	566

Ratio of Operating Expenses to Gross Receipts, 8.22 per cent.

Appropriation of Gross Income

	1912
For Maintenance Expenses.....	37.8%
For Traffic, Transportation and General Expenses.....	44.4%
For Fixed Charges.....	16.9%
For Surplus.....	0.9%
	100.0%

NOTES.

This railway runs from the Caribbean port of Santa Marta inland to the town of Fundacion on the river of the same name. The line traverses through rich banana lands and is being extended into new territory capable of raising large quantities of fruit. The harbor of Santa Marta is thirty feet in depth and has accommodation for large sized steamers.

The preference stock is entitled to 7% per annum in priority to the ordinary

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stock. No dividends are being paid. The amounts of capital authorized and outstanding, September 30, 1912, were as follows:

	Authorized	Outstanding
Ordinary Shares (par £10).....	£200,000	£200,000
Preferred Shares (par £10).....	400,000	159,160
*First Charge Debentures.....		*190,400

*Bear interest at 6%; an additional £9,100 of these Debentures had been redeemed and cancelled prior to September 30, 1912. The outstanding amount had been reduced to about £188,000 prior to December 31, 1913.

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ECUADOR.

Ecuador, in spite of being the smallest of the West Coast Republics south of Panama, has an area large enough to comprise all of New England, New York and New Jersey. Within its 115,000 square miles are approximately 1,400,000 inhabitants, a large majority of whom are Indians or of mixed races. Its capital, Quito, with a population of perhaps 85,000, is in the heart of the Andean Plateau, 9,375 feet above the Pacific Ocean. Its age far outdates the Spanish conquest (1534) at which time it was one of the great centers of the Inca civilization. It is to-day the most important city in the Republic. Guayaquil, the chief port, has an estimated population of over 70,000 and is located about 60 miles from the Sea, on the River Guayaquil, near where this stream empties into the Gulf bearing the same name. It has been noted for years on account of its unhealthfulness, although this condition will be greatly improved by the sanitation of the port which is to be carried out by the J. G. White Co. in the immediate future. This engineering firm will drain the marshes and give to the City a comprehensive water supply. Although Guayaquil is the westernmost city of any importance in South America it is almost on a parallel line south of the Allegheny Mountains. The Republic is in three divisions: the lowlands west of the Andes, the mountainous plateau of the interior, on which Quito is located, and the vast Oriente to the east. The latter, which contains more than half of the country's area, is very thinly settled, in many places practically unexplored.

In 1911 (latest data obtainable) the foreign trade of Ecuador was estimated at \$21,690,476, including \$13,666,371 exports and \$8,024,105 imports.

The only important railway in the Republic is the Guayaquil & Quito Ry. (which see) extending from the former port to the capital. The railway which is owned by an American company is 288 miles in length. En route to Quito, it climbs to an elevation of 11,841 feet, and passes through Alausi (population 6,000), Riobamba (population 18,000), Ambato (population 10,000), etc. This enterprise was first started in 1872, and prior to 1876 the portion of the existing line between Yaguachi (about 14 miles from Guayaquil) to Barraganetal (total about 29 miles) was completed. During the eighties the road was continued on for a few miles, Sibamba being the goal in view, while Yaguachi was connected by rail to Duran (opposite Guayaquil). Finally, in 1908, the road was completed to Quito and may at some future date be extended to Ybarra. The undertaking was a colossal one rivalling Meiggs' famous Oroya or Peruvian Central Ry. in the Republic of Peru. Enormous precipices and wide rivers had to be crossed and the grade in places was extremely heavy. The railway has had financial difficulties to contend with from the start. Its bonded debt bears the guarantee of the Government, and comprises an amount of \$2,177,000 in 6% Prior Lien bonds of the Guayaquil and Quito Ry., an amount of \$10,808,000 in 5% Mortgage Bonds of the same undertaking, and 4% Salt Bonds to an amount of \$919,890. The Salt Bonds have been brought up to date in respect of amortization and sinking fund. The interest on the Prior Lien Bonds is also being regularly paid, and the coupons of the Mortgage Bonds have been paid up to Janu-

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ary, 1912. The position is an improving one, and the outlook for the railway's future is better than ever before.

An important railway is the Bahia line, which has been constructed to serve the Manabi cocoa district. Another line is the Central Ry. of Ecuador, to connect Santa Ana with the port of Manta, and this is proving a great boon to the vegetable ivory and coffee districts of Manabi. The provisional programme of railway construction includes a considerable mileage designed to open up the coal district in Biblian, the petroleum area at Salinas, and other centres.

At the end of the year 1912 there were in operation in Ecuador 396 miles of railroad; 423 miles were in course of construction, and 440 miles under consideration. Of the road in operation, 288 miles belong to the Guayaquil & Quito Ry. Co.; 48 miles to the Compagnie Francaise de Chemins de Fer de l'Equateur, a French company; 36 miles to the Central Ry. Co. of Ecuador, and 24 miles are owned by the Government. Of the mileage in course of construction 249 miles belong to the above-named French company, 93 miles to the municipality of Guayaquil, 73 miles to the Government, and eight miles to the Central Ry. Co. of Ecuador. All the road in project is in the hands of the Government.

Central Ry. of Ecuador.

This company was incorporated to construct a line of railway between the Port of Manta, Ecuador and Santa Ana (about 44 miles). The company has issued \$500,000 (£100,000) stock and \$1,000,000 (£200,000) 6% bonds.

Work was commenced in 1911 and it was expected that the line would be completed by 1914. The railway reverts to the government after 50 years.

Guayaquil & Quito Ry.

This company (incorporated 1897) operates a line of railway (completed 1908) from Duran, opposite Guayaquil, the chief port of Ecuador, to Quito the capital, with branches (total about 288 miles). A bridge between Duran and Guayaquil is projected. The company has outstanding approximately \$5,250,000 7% cumulative preferred stock and \$7,033,000 common stock of which latter class of stock 49% was originally issued to the Government. No dividends have been paid. The bonded debt consists of: (1) Approximately \$2,177,000 6% Prior Lien Sinking Fund bonds due 1930, guaranteed principal and interest by the Government of Ecuador on which full interest is being paid; (2) \$10,808,000 First Mortgage Gold 5% (formerly 6%) bonds due 1932, secured by a lien subject to the Prior Lien bonds on all the custom duties, and guaranteed principal and interest by the Government of Ecuador. The four coupons on these bonds due July, 1907, to January, 1909, were exchanged for \$90 in 4% "Salt" bonds (see following). The payment of the July, 1910, coupon and of subsequent coupons, was deferred. The July, 1910, coupon and the two coupons due in 1911 have since been paid (July, 1911, coupon

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paid September, 1913); (3) 4% Salt bonds secured on the Republic's salt monopoly. Sinking Fund of 4% is applied to purchasing bonds at or below par. The original issue was \$1,105,380. The bondholders have the right to appoint three of the eleven directors.

The Gross Earnings of this company, as reported, have been approximately as follows: 1906-7, \$468,969; 1907-8, \$539,589; 1908-9, \$759,493; 1910-11, \$885,718; 1911-12, \$1,200,844; 1912-13, \$1,002,181.

The gauge of this railway is 3 ft. 6 in. The equipment consists of 17 locomotives, 19 passenger coaches, 109 freight cars, 2 steamers and 4 lighters.

It is expected that following the sanitation of the Port of Guayaquil, to be carried out by J. G. White & Co. of London and New York, the earnings of this road will show a large increase owing to the additional shipping.

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GUIANA.

British, Dutch and French Guiana.

Demerara or British Guiana is of a peculiar physical formation. The flat coastal land whereon are located Georgetown (the capital), Berbice, New Amsterdam and practically all of the important towns in the Colony is separated from the interior by a considerable tract of low swampy country, through which no railroad has ever been built. As the colony has several navigable rivers, a railway to the interior will likely be long delayed. The Demerara Ry., an old established line, extending from Georgetown to New Amsterdam, is the most important in the Colony. There is another railway (a small one) located in the interior, extending from a point 60 miles up the Demerara River to the Essequibo River (about 19 miles). This railway forms part of the route to the gold mines of the interior and is operated by Messrs. Sprotons, Ltd., who control the local steamer lines of the Colony. British Guiana is a country rich in resources, and its interior is capable of vast development, about six-sevenths of the 90,000 square miles comprising the Colon being forest-clad.

Railway communication in the thinly settled Colony of Dutch Guiana or Surinam is limited to a single line extended from Paramaribo, the capital, into the interior, built to carry the plantation products of the country back from the coast and to a few short spurs to the various estates. The country has an area of 41,060 square miles and a population of from 80,000 to 90,000, of which 35,000 persons are found in the capital. The products of the land consist mainly of gold, sugar, timber, balata, cocoa and bananas.

There are no railways (as far as the writer is aware) in French Guiana (Cayenne). The Colony, which is a French penal settlement, though probably rich in resources, is but little developed.

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Demerara Ry.

Year	Avg. Miles Oper.	Gross	Surplus	Year	Avg. Miles Oper.	Gross	Surplus
1908-9	75	\$277,964	\$157,221	1911-12	75	\$248,564	\$123,275
1909-10	75	260,457	137,871	1912-13	*75	237,505	102,246
1910-11	75	252,303	129,293				

*Demerara Ry. (21 miles); Berbice Ry. (39 miles); West Coast Ry. (15 miles).

Stock Outstanding June 30, 1913			Debenture Stock Outstanding June 30, 1913	
Ordinary.....	\$825,000		Debenture Stock (4%).....	\$350,000
Pfd. Ordinary (3 1/2%).....	161,000			
Preference (7%).....	575,000			
Extension P'f'ce (4%).....	1,562,500			

The method of sub-dividing Operating Expenses as shown below is somewhat different from the method used in the annual report of the Company.

Capitalization		
Stock (£624,700).....	Total \$3,123,500	Per Mile \$41,646
Debenture Stock (£70,000).....	350,000	4,667
Total.....	3,473,500	46,313

Income Account Year Ending June 30, 1913

Average miles operated, 75.			
Gross Receipts.....	£47,501	Total \$237,505	Per Mile \$3,167
Operating Expenses.....	36,751	183,759	2,450
Net Receipts.....	10,750	53,746	717
Other Income (Gov't Subsidy).....	12,500	62,500	833
Total Net Income.....	23,250	116,246	1,550
Fixed Charges.....	2,800	14,000	186
Surplus.....	20,450	102,246	1,364

Operating Expenses			
Maintenance of Way.....	£11,362	Total \$56,811	Per Mile \$757
Maintenance of Equipment.....	3,849	19,244	257
Traffic and Transportation Expenses.....	13,734	68,672	916
General Expenses.....	7,806	39,082	530

Ratio of Operating Expenses to Gross Receipts, 77.4 per cent.

Appropriation of Gross Income		
For Maintenance Expenses.....	1912-13 25.3 %	1911-12 22.0 %
For Traffic, Transportation and General Expenses.....	35.9 %	38.9 %
For Fixed Charges.....	4.7 %	4.5 %
For Surplus.....	34.1 %	39.6 %
	100.0 %	100.0 %

NOTES

This railway, which was incorporated about 67 years ago, is located in the Colony of British Guiana, South America. The main line extends from Georgetown, the capital, to New Amsterdam, on the Berbice River (60.5 miles). The company also operates a line known as the West Coast Ry. extending from Georgetown westward (15 miles). This latter line is to be extended in the immediate future to Parika, a town located on the Essequibo River. An extension from New Amsterdam to the border of Dutch Guiana is projected.

The company has outstanding £70,000 4% Debenture Stock (issued in 1901) and various classes of Preference and Ordinary Stocks as shown on the table page. The dividend, £12,500 on the £312,500 Extension Preference

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Stock issued 1896, is equal to the amount annually received from the Government of British Guiana as a subsidy. The Ordinary Stock was largely issued in the year 1852.

The company has regularly paid dividends (cumulative) on its Preference Shares (issued in 1861) for a number of years, except for one period of four years (since paid off in stock. See next paragraph). Dividends are paid semi-annually. Dividends on the Ordinary Stock since 1908 have been as follows: 1908-9, 3%; 1909-10, 3%; 1910-11, 3%; 1911-12, 1½% (for the first half year); 1912-13, none. The passing of the Ordinary Stock dividend was due to loss in earnings, due to a drought stated to have been the most severe in living memory. The receipts for the calendar year 1912 were the lowest since 1869.

The Preferred Ordinary Stock which is entitled to and receives dividends of 3½% per annum, was issued in the year 1908, to holders of the 7% Preference Shares in lieu of deferred dividends covering a period of four years.

The results from the operations of the three lines mentioned above were as follows:

	Miles	Gross Receipts	Expenses	Net
Demerara Ry.....	21	£31,919	£16,062	£15,857
Berbice Ry.....	39	9,224	13,542	—4,318
West Coast Ry.....	15	6,358	7,147	—789
Total.....	75	£47,501	£36,751	£10,750

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PARAGUAY.

The only railway in the Republic of Paraguay is the Paraguay Central Ry. (which see). This line, since the completion of the extension to the Argentinian frontier, has increased greatly in importance. The road forms part of a through route from Asuncion to Buenos Ayres, direct passenger train service having been established in October, 1913. To conform with the connecting railways of Argentine Republic, the gauge of Paraguay Central was changed to 4 ft. 8½ in., necessitating the purchase of entirely new equipment. This company is building an extension to the Brazilian frontier, where it will connect with the Brazil Ry.'s system. This will mean much to the Inland Republic as it will open an easy route for immigration, so necessary for the development of the vast resources of the country which has an area of 196,000 square miles (larger than New England and the Middle Atlantic States combined) and a population of only 800,000. Surveys have been made for the construction of a trans-continental railway system, to include the new section of the Paraguay Central Ry., which will extend from the Port of Sao Francisca, westward through the State of Parana, Brazil, to the Falls of Iquazu (said to rival Niagara), where the Republics of Brazil, Argentine and Paraguay join, thence across Paraguay to Asuncion (via Paraguay Central lines completed or building), and up through the Chaco Country to Bolivia where it either will connect with a line (presumably the Antofagasta & Bolivia Ry.) or else will be extended to Chili and the Pacific Coast. The construction of this system, which will likely take a number of years to complete, will open up vast unexplored territory in Paraguay and Bolivia and will do much to develop the country throughout the four republics traversed. A large amount of traffic is assured as vast tracts of forest, agricultural and grazing lands will be opened to settlement and cultivation.

The total foreign commerce of Paraguay for the year 1911 was \$11,013,412.

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Paraguay Central Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1907-8	155	\$431,040	1910-11	168	\$600,115
1908-9	155	387,230	1911-12	232	559,918
1909-10	156	485,630	1912-13	232	732,557
		97,126			146,611

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Ordinary	\$2,814,650	Debenture Stock (6%)	\$3,000,000
		Notes (6%)	2,500,000
		*Debenture Stock (5%)	6,500,000

*Interest is contingent on earnings of the Company, no interest paid from earnings of 1912-13.

Capitalization		Total	Per Mile
Stock	£562,930	\$2,814,650	\$12,132
Debenture Stock, etc.	2,400,000	12,000,000	51,724
Total	2,962,930	14,814,650	63,856

Fixed Charges below include \$51,516 (£10,303). Interest, discount and expenses on 6% 3-year Notes—Proportion chargeable to Revenue, \$4,504 (£901), loss on exchange and \$7,041 (£1,408) loss on sale 2½% Guaranteed Stock.

Income Account Year Ending June 30, 1913			
Average miles operated, 232.			
	Total		Per Mile
Operating Revenues	£146,511	\$732,557	\$3,158
Operating Expenses	80,574	402,871	1,737
Net Operating Revenues	65,937	329,686	1,421
Other Income	3,955	19,775	85
Total Net Income	69,892	349,461	1,506
Fixed Charges	52,442	262,211	1,130
Surplus	17,450	87,250	376

Operating Expenses			
Maintenance of Way	£22,986	\$114,928	\$495
Maintenance of Equipment	8,420	42,101	182
Traffic and Transportation Expenses	34,709	173,545	748
General Expenses	14,459	72,297	312

Ratio of Operating Expenses to Operating Revenues, 55.0 per cent.

*This Surplus before deducting \$25,000 (£5,000) towards reduction of Debit Balance.

Appropriation of Gross Income		1912-13
For Maintenance Expenses		20.8%
For Traffic, Transportation and General Expenses		32.7%
For Fixed Charges		34.9%
For Surplus		11.6%
		100.0%

	1912-13	1911-12
Ton miles per mile of road	59,678	36,500
Passenger miles per mile of road	46,172	29,159
Miles, yards and sidings	21	19

NOTES.

A description of the capitalization of this Company follows:

Capital of the Company.	Authorized.	Issued.	Interest per annum.
1. 6% Prior Lien Deb. Stock	£600,000	£600,000	£36,000
2. 6% Notes	500,000	250,000	15,000
3. 5% Debenture Stock	1,300,000	1,300,000	Nil.
4. Ordinary Shares	562,930	562,930	Nil.

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1. 6% Prior Lien Debenture Stock.—This is a First Charge on the undertaking, both present and future. Interest is payable January and July.

2. 6% Notes.—These Notes are payable August, 1914. Though £15,000 per annum is required for their service, some £6,000 or £7,000 only is chargeable to Revenue.

3. 5% Debenture Stock.—Interest is contingent on the earnings of the Company until the full amount has been paid for three consecutive years, or until a dividend is distributed on the Ordinary Shares. The Debenture Stock received $4\frac{1}{2}\%$ per annum for the period from February 25 to June 30, 1908; £1 2s. 5d. % for 1908–9 (paid in May, 1910), and nothing since to November, 1913.

4. Ordinary Shares.—No dividend has yet been paid.

This railway extends from Asuncion, the capital of Paraguay, via Paraguari, Villa Rica and Borja to Villa Encarnacion on the Parana River (232 miles). A car ferry was placed in service in October, 1913, between the latter point and Posadas, Argentine, the terminus of the Argentine North Eastern Ry. The gauge of the Paraguay Central Ry. has been changed to a gauge similar to that of the Argentine North Eastern Ry. and together with the latter and the Entre Rios Rys. forms an important Trunk System instead of a purely local line isolated from all other rail connections. Through the completion of this all rail line the time consumed in making the trip from Asuncion to Buenos Ayres has been reduced from 5 days to 54 hours. Through passenger service was established October 12, 1913.

A large mileage of new extensions is either projected or under construction, including (1) a line from Paraguari (on the main line) to Carapegua (under construction) and (2) a line from Borja easterly to the falls of Iguazu on the Brazilian frontier.

New up-to-date equipment has been acquired.

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PERU.

Most of the railway mileage of Peru is controlled by the Peruvian Corporation, which was formed in 1890 by the holders of the external debt of this republic (it having defaulted in interest payments, etc.). The plan was that the holders of the £51,423,190 obligations would receive from the Government all the railroads for a term of 66 years, together with mining privileges, land grants, etc. In return the bondholders were to deliver over to Peru one-half her obligations abroad, and look to Chili for a settlement of the other half. Chili settled by paying a large sum derived from the sale of guano. The bondholders agreed to finish a number of railway lines which were then uncompleted, and they were granted the right of free navigation on Lake Titicaca; also 3,000,000 tons of guano, and the sum of £80,000 per annum for 30 years from October, 1893. The latter annuities are secured by the proceeds of the Custom House at Callao and payments are being made regularly.

The principal railway taken over by the bondholders was the Oroya or Peruvian Central Ry., "the highest line in the world." This line, the history of which serves as an illustration of the difficulties of railroad building in Peru and the adjoining countries, was begun by an American, Henry Meiggs, whose intention it was to have the road cross the Andes and reach some port on the Amazon. This railway starts at the port of Callao, and in a distance of 106 miles surmounts an elevation of 15,865 feet (Mont Blanc in the Alps is 15,781 feet high). After leaving Callao the line passes Lima, follows the Rincon River for several miles, after which it starts to climb until it reaches Chosica, a famous health resort, 33 miles from the starting point (height 2,700 feet). About 14 miles further on is San Bartolome (height 5,000 feet), near which place a "V-switch," the first of its kind ever tried, is in use. This is necessary as the mountain ledge, along which the line is constructed, breaks off abruptly and another ledge parallel with the one used must be followed in order to reach the summit above. Meiggs, after deciding on the "V-switch," levelled off a stretch of embankment on the left hand side of the track and erected a turntable, the plan being to run the train past the turntable, uncouple the engine, turn it around and hitch it to the rear of the train. In order to do this in the limited space available, the locomotive is run down one arm of the "V-switch" onto the turntable, which is swung around until the engine faces the other arm of the "V" which is followed to the rear of the train which now runs in practically the direction from which it came, only using another course. There are about 21 additional "V-switches" in use along the route.

After the railway leaves San Bartolome there is in the next five miles a climb of about 1,000 feet to reach the Cuesta Blanca or White Hill Tunnel. On a portion of this stretch of road the Verrugas Bridge or Viaduct is crossed. The construction of this bridge, which is set at an altitude of 5,840 feet, was one of the great difficulties of the undertaking. It is a cantilever bridge 575 feet in length and had to be placed nearly 300 feet above the bottom of the ravine, through which at certain seasons there rushes a raging torrent. The spanning of this gorge cost hundreds of lives, mostly through the out-break of a disease known as the "Verrugas fever." Beyond the Cuesta Blanca Tunnel the line

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zigzags its way until Chicla, 87 miles from Callao, is reached, at an altitude of 12,215 feet. In the 34 miles from the tunnel to the town, there is one stretch a mile in length in which a rise of 700 feet must be accomplished, followed by another stretch of five miles in which an ascent of another 2,000 feet is necessary. After this comes another portion of the line whereon Meiggs performed another wonderful engineering feat. The railway at this point tunnels a high mountain crag to emerge at the brink of a ravine, at the bottom of which a stream rushes. On the other side of the ravine another mountain peak had also to be tunneled. Across the chasm there was built out from the two tunnels a bridge, known as the *Infiernello* (Hell) Bridge. The sharp cliffs forming the sides of the chasm extend so high above the railway that they almost exclude the light of day. The line then proceeds through scenes of wild grandeur until Chicla is reached. The amount of blasting required in laying out the right of way necessitated the use of over 500,000 pounds of explosives per month, and over 8,000 men were at times employed in the building of the road. When Chicla was reached in 1877 Meiggs died, his death being due to overwork and the great strain connected with planning the enterprise. The Government's treasury was then running low and work ceased, not to be resumed until 1891, when the Peruvian Corporation took over the railway. This corporation let a contract to complete the line to William Thorndike (like Meiggs an American), who continued along the surveys marked out by his predecessor, until the maximum point of the main line, at the great height of 15,665 feet, is reached. A branch was also constructed to Mirochoca, which reaches the height of 15,865 feet. At a point 106 miles from Callao, and at an altitude of 15,665 feet above the Pacific Ocean, a tunnel (the highest in the world) 3,855 feet in length had to be cut through a mountain peak forming a part of the continental divide. This is located in the regions of almost perpetual snow. From the eastern portal of this—the Galera tunnel—the railway begins its descent to the terminal at Oroya, about 31 miles beyond. This town, a place of some importance, is about 12,178 feet above the level of the sea, is the junction of the extension to Huancayo and is also the starting point of the Cerro de Pasco Ry.

The building of this railway cost, it is estimated, fully \$200,000 per mile and not less than 7,500 lives. The undertaking was one of the greatest engineering feats of modern time.

Peru is not well furnished with railway facilities, but the comparatively small mileage in operation—1,841 miles in a State which has an area of 650,000 square miles and a population of 4,700,000—is accounted for by the difficult configuration of the country for the construction work. In comparison with the cost in other South American countries, Peru has had to pay dearly for her railways, and the figure of \$100,000 per mile, which it is stated much of the early railway work cost, is certainly not an exaggerated estimate.

Under the arrangement which is now a familiar story the Peruvian Corporation (which see) operates the railway system. The Central of Peru Ry. is in many respects one of the most remarkable railways in the world. It has a length of 249 miles, and the track, which is of standard gauge, is carried to an altitude of 15,665 ft. A branch now under construction will extend the Oroya-Huancayo section to Ayacucho. Another important railway, in addition to the "Central" described above and elsewhere, is the Southern Ry. of Peru (see that company), which connects Mollendo, the second port of Peru, with Cuzco, and through Puna with Lake Titicaca, and Guaqui, the starting point of the railway, to La Paz. It is hoped to provide a rail route between Puno and Guaqui, at a cost of about \$2,500,000. This will

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give a direct rail route from Buenos Aires to Mollendo. The Pacasmayo and Guadalupe Ry. is to be extended to Magdalena, and eventually to Cajamarca. Ilo, the port which is said to be coveted by Bolivia, is served by a narrow-gauge line 62 miles in length from Moquegua, the centre of a fertile wine and olive district.

Peruvian Corporation.

The reasons for the formation of the Peruvian Corporation (incorporated in 1890) are given in the several pages just preceding. As stated the holders of the Republic's bonds which defaulted payment exchanged each £100 of their bonds for either £24 preference stock, entitled to cumulative dividends at the rate of 4% per annum or for £30 ordinary stock. The Corporation was empowered to issue bonds or debentures up to £6,000,000. The railway concessions are for 66 years; the operations of these railways are described later.

The Income Accounts of the Peruvian Corporation, covering a period of five years, is given as follows:

Year ending June 30.....	1908-9	1909-10	1910-11	1911-12	1912-13
	£	£	£	£	£
Net revenue, Railways and					
Steamers.....	228,247	321,267	452,365	418,910	415,314
Government annuity.....	80,000	80,000	80,000	80,000	80,000
Guano account.....	140,854	103,016	114,008	141,143	113,471
Interest, exchange, etc.....	20,526	18,137	5,357	6,935	9,242
Total income.....	469,627	522,420	651,730	646,988	618,567
Administration.....	19,281	21,243	17,890	23,683	23,166
Balance of revenue.....	450,346	501,177	633,840	623,305	595,401
Debenture interest (4%).....	216,000	216,000	216,000	216,000	216,000
Interest on Loans.....	3,406				
Sums written off.....	22,179	20,543	72,870	26,824	22,517
Debenture amortization.....	27,000	53,181	54,000	54,000	54,000
Available balance.....	181,761	211,453	290,970	326,481	302,884
To reserve.....				50,000	25,000
Additional debenture interest (2%).....	108,000	108,000	108,000	108,000	108,000
Available for preference.....	73,761	103,453	182,970	168,481	169,884
Preference dividend.....	74,492	93,120	149,033	167,691	167,704
	(1%)	(1¼%)	(2%)	(2¼%)	(2¼%)
Year's balance.....	Dr. 731	10,333	33,927	790	2,180
Carried forward.....	13,144	23,477	57,413	58,203	60,382

The portion of the Net Revenue for 1912-13, derived from the operation of the railways and steamer lines were:

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	£	\$
The Peruvian Central Ry.....	183,975	919,875
The Peruvian Southern Ry.....	128,003	640,015
The Guaqui-La Paz Ry.....	38,351	191,755
The Trujillo Ry.....	18,891	94,455
The Payta Ry.....	9,088	45,440
The Pacasmayo Ry.....	4,327	21,635
The Pisco to Yca Ry.....	6,071	30,355
The Chimbote Ry.....	-3,390	-16,950
Lake Titicaca Steamers.....	30,296	151,480
River Desaguadero Navigation.....	-298	-1,490
	£415,314	\$2,076,570

Note: The total Gross Receipts from the Railways and Navigation were £1,146,300 (\$5,731,500) as against £1,080,290 (\$5,401,450) in 1911-12. The total Net Receipts for 1912-13 were £438,501 (\$2,192,505).

The Capital Outstanding at June 30, 1913, was as follows:

	Total
4% Cumulative Preference Shares (par £1).....	£7,500,000 \$37,500,000
Ordinary Shares (par £1).....	9,000,000 45,000,000
*Debentures 6%.....	5,176,000 25,880,000
Total Capital Outstanding.....	£21,676,000 \$108,380,000

*4% of which is fixed interest. The original amount of these Debentures was £5,400,000 (\$27,000,000), the balance having been redeemed through the operation of a sinking fund, including £60,750 (\$303,750) redeemed (at 105%) in 1912-13. The outstanding amount of debentures was reduced February 1, 1914, to £5,111,800 through the operation of the Sinking Fund.

The arrears of dividend accrued on the Preference Stock amount at June 30, 1913, to 73½%.

Among the Assets and Liabilities as shown in the balance sheet as of June 30, 1913, were the following items:

Assets:

Cost to June 30, 1912, of the various Properties and Concessions acquired under or in connection with the contract for Conversion of the Peruvian External Debt, the expenditure to date in developing the undertakings (including £892,840 discount on Capital, cost of issuing Debentures, etc.) after deducting the value of railroad stocks.....	£12,772,305	\$63,861,525
Stocks of Companies (including £2,224,800 Southern Ry. of Peru stock, £1,333,327 Central Ry. of Peru stock, £439,993 Trujillo Ry. stock, etc.).....	4,252,223	21,261,115

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Carried over	£17,024,528	\$85,122,640
Expenditures in Reconstructing and Extending the above Railways.....	4,859,692	24,298,460
Purchase of, and Expenditure on, Guaqui-La Paz Ry.....	371,938	1,859,690
Cost of Mallendo Port Improvement.....	119,607	598,035
Investments at Market Value.....	138,650	693,250
Cash, Bills Receivable, etc.....	120,091	600,455
Other Assets.....	452,109	2,260,545
Total Assets.....	£23,086,615	\$115,433,075
<i>Liabilities:</i>		
Stocks and Debentures outstanding June 30, 1913.....	£21,676,000	\$108,380,000
Reserve Account (£625,000) also Lake Steamers and Fire Insurance Account (£40,938).....	665,938	3,329,690
Sinking Fund, Credit Balances, Accrued Interest, etc.....	383,591	1,917,955
Balance to Net Revenue Account..	361,086	1,805,430
	£23,086,615	\$115,433,075

The Peruvian Corporation has surveyed a route to head of navigation of the Madre de Dios River, which flows easterly passing through Eastern Peru and Northern Bolivia until, joining the Beni River, it becomes an important tributary of the Amazon. At Riberalta (Bolivia) the traffic of the railway and the river will be transferred to the Madeira-Mamore Ry. around the series of cataracts which make navigation impossible, and then re-shipped down the Madeira and the Amazon River to the sea.

There follows under separate heads a brief description of several of the important railway lines operated by the Corporation. It is not deemed necessary to review the operations of the Steamer Lines, etc., on Lake Titicaca (the highest lake in the world) and the River Desaguadero other than to state that the Gross Receipts for 1912-13 were £63,967 (\$319,835) a loss of £414 as compared with 1911-12, and the Net Receipts were £29,998 (\$149,990) a gain on 1911-12 of £2,498.

Central of Peru Ry.

This railway which bears the distinction of being "the highest line in the world" was started in the sixties by Henry Meiggs, an American, and finally completed to Oroya (138 miles) in the nineties by William Thorndike (also an American). A description of the building of this line, which cost, it is stated, about \$42,500,000, is given under the general head of "Peru." In addition to the Callao-Lima-Oroya Line the Central also operates a railway from Lima to the port and seaside resort of Ancon, where connection is afforded with the

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North Western of Peru Ry. (since June 30, 1913, worked by the "Central") to Huacho, Sayan, etc. There are also in operation an extension from Croya to Huancayo, from which latter point a line is being built to Ayacucho, capital of the state bearing that name. There is also a branch from near the Galera tunnel (the highest tunnel in the world—length 380 feet), to the mines at Morococha. This branch reaches the great altitude of 15,865 feet.

The earnings of this company (including the Morococha Branch and the Oroya-Huancayo Extension) for 1912-13 and 1911-12 were as follows:

	1912-13		1911-12	
Gross Receipts..	£507,809	\$2,539,045	£455,128	\$2,275,640
Working Expenses	320,031	1,600,155	254,806	1,274,030
Net Receipts	£187,778	\$938,890	£200,322	\$1,001,610

£183,975 (\$919,875) of the Net Receipts for 1912-13 were paid to the Peruvian Corporation. The latter owns £1,333,327 (\$6,666,635) stock of the Railway.

This railway carried 2,407,867 passengers and 408,556 tons of freight in 1912-13 as against 1,807,060 passengers and 340,720 tons of freight in 1911-12. About \$125,000 (£25,000) was expended during the year for permanent additions and improvements, etc.

The gross receipts in 1892-3 were in round figures.....	£91,000
In 1902-13 they were.....	234,000
In 1912-13 the gross receipts were.....	507,000
The net receipts in 1892-3 were.....	3,616
In 1902-3 they were.....	88,671
In 1912-13 they were.....	187,778

See North-Western Ry. of Peru, regarding the provisional working of that line by the Central of Peru Ry.

The total length of this railway was, at the close of 1913, 249 miles.

Important coal fields have been found along the Huancayo Extension and are to be likely developed by the Peruvian Corporation.

Cerro de Pasco Ry.

The Cerro de Pasco Ry. is owned by the Cerro de Pasco Mining Co. and operates a line of railway from Oroya, Peru (on the Central of Peru Ry.) to Cerro de Pasco, with a branch to the company's coal fields (104 miles operated—total track including sidings, etc., 125. The main line has an average grade of 1.5% with a maximum grade of 3.7%, is of 4 ft. 8½ in. gauge, and cost upward of \$2,000,000. Equipment consisted at last accounts of 19 locomotives and 306 cars. The railway is said to be on a paying basis.

Cerro de Pasco is 14,300 feet above the sea level and the mines there (discovered 1630) had produced to the close of the Nineteenth Century 40,000,000 tons of silver and copper ore.

This property is owned and operated by an American company (a close corporation).

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Chimbote Ry.

This railway runs from the port of Chimbote, located in the State of Ancacho, about 218 miles north of Callao, inland for about 35 miles via Sucheman (its former terminal) to Canon Del Pato. Extensions are planned which will carry the railroad inland for about 120 miles to Huaras and Recuay, and which will make it a line of far greater importance than at present, as it will run through a rich mining country, capable of considerable development. At present a small traffic consisting of sugar, cotton, rice and mineral products, is handled, unprofitably, as the following table of earnings for 1912-13 and 1911-12 will show:

	1912-13		1911-12	
Gross Receipts.....	£4,380	\$21,900	£4,445	\$22,225
Working Expenses....	7,772	38,860	5,718	28,590
Net Loss.....	£3,392	\$16,960	£1,273	\$6,365

The Income Account of the Peruvian Corporation was debited in 1912-13, £3,390 (\$16,950) advances to make up the Railway's operating deficit.

The heavy increase in Working Expenses was due to increased Maintenance Expenses, caused by floods from the River Santa.

It is stated that Chimbote is one of the best ports in Peru, being situated in the Bay of Ferrol, which is 8 miles by 4½ miles in size and protected by a long isthmus and several islands. A large coal area has been discovered upwards of 50 miles inland.

Ilo-Moquequa Ry.

The Peruvian Corporation operates this line under arrangement with the Peruvian Government, but the conditions of the lease have not yet received the sanction of the Congress of the Republic. Pending the conclusion of a definite arrangement between the Corporation and Peru, no separate statement of income has been shown in the annual report of the former. The railway is about 62 miles in length, linking up the port of Ilo with Moquegua, the capital of the province of that name. The district traversed is an agricultural one of great productiveness, its principal exports being wine, olives and olive oil.

Ilo possesses a most excellent harbor and is located in the far southerly part of the Republic not far from the Chilean frontier.

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North Western Ry. of Peru.

Year	Avg. Miles Oper.	Gross Receipts
*1912-13	†130	‡\$146,535
*July 8, 1912 to June 30, 1913.	†Approximate.	‡Gross Income \$458,040. (£91,608)

*Stock Outstanding June 30, 1913		*Debentures Outstanding June 30, 1913	
Common.....	\$1,094,335	First Mtge Debs. (5%).....	\$4,983,000
		Second Mtge Debs. (5%)..	89,000

*(£218,867). Additional stock to the amount of \$1,876,975 (£375,395) also \$5,580 (£1,116) Second Mortgage Debentures are to be issued to the Peruvian Railway Construction Co.

	Capitalization	Total	Per Mile
Stock.....	£218,867	\$1,094,335	\$8,418
Bonds.....	1,014,400	5,072,000	39,015
Total.....	1,233,267	6,166,335	47,433

Fixed Charges below include \$44,955 (£8,991) Expenses and Discount re Debenture Issues.

Income Account Year Ending June 30, 1913

Average miles operated 130.

	Total	Per Mile
Gross Receipts.....	\$29,307	\$146,535
Operating Expenses.....	25,779	128,895
Net Receipts.....	3,528	17,640
Other Income.....	62,301	311,505
Total Net Income.....	65,829	329,145
Fixed Charges.....	83,907	419,535
Deficit.....	18,078	90,390

Operating Expenses		
Maintenance of Way.....	\$6,320	\$31,600
Maintenance of Equipment and Locomotive Power	11,712	58,560
Traffic and Telegraph Expenses.....	5,138	25,690
General Expenses.....	2,609	13,045
		100

Ratio of Operating Expenses to Gross Receipts, 87.9 per cent.

Other Income above includes \$311,440 (£62,288) Interest Guaranteed by the Government of Peru under the terms of the Concession.

Appropriation of Gross Income

	1912-13
For Maintenance and Locomotive Expenses.....	19.7%
For Traffic, Transportation and General Expenses.....	8.4%
For Fixed Charges.....	91.6%
For Surplus.....	Deficit

NOTES

The North Western Ry. Co. of Peru was formed to construct a line of railway located wholly within the Republic of Peru, from Lima, the capital, via Ancon and Huacho to Sayan. During 1912-13 the line was in operation from Ancon to Huacho and Sayan, a distance of about 130 miles.

The important section of the line between Lima and Ancon has not yet been completed owing to opposition on the part of the Government.

The company has agreed to an arrangement with the Central Ry. of Peru for a third rail to be laid on that Company's line between Lima and Ancon to meet the difference in the gauges of the two lines. To January, 1914, the Government had withheld its sanction to the arrangement, necessitating the trans-shipment of all freight and passengers.

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Pending a settlement with the Government the North Western Ry. of Peru has entered into a temporary arrangement with the Central Ry. of Peru, whereby the latter will work the former's line on a cost and percentage basis.

No dividends are being paid on the shares of the North Western Ry. of Peru. A total of 218,867 shares of £1 each had been issued to June 30, 1913, while 375,395 further shares are to be issued to the Peruvian Ry. Construction Co.

In accordance with the terms of the concession the deficit for 1912-13, \$90,390 (£18,078), as shown on the table page in this book, is repayable by the Government, the company being indemnified against loss on working the railway.

Pacasmayo & Guadalupe Ry.

This railway extends from the port of Pacasmayo, in the State of that name, with Guadalupe, 26 miles inland (population 4,000), Yonan, Chilata, etc., the total length being about 84 miles. Plans have been promulgated whereby a further extension will be built to Magdalena and later to Cajamarca, about 25 miles beyond Chilata. Cotton, rice and sugar are the principal commodities handled.

The earnings of this railway for 1912-13 and for 1911-12 were as follows:

	1912-13		1911-12	
Gross Receipts.....	£20,898	\$104,490	£19,143	\$95,715
Working Expenses....	15,446	77,230	14,539	72,695
Net Receipts.....	£5,452	\$27,260	£4,604	\$23,020

Of the Net Receipts for 1912-13, £4,327 (\$21,635) were paid to the Peruvian Corporation, the latter owning £199,693 (\$998,465) of the stock.

The Chilata extension represents a cost of £235,000; to date it has shown but little return on the investment.

Payta to Piura Ry.

This railway, like most other railways in Peru, is controlled by the Peruvian Corporation, the latter holding 53% or £53,000 of its £100,000 stock, including £8,000 stock purchased during 1912-13. A dividend of 7% was paid on this £100,000 stock in 1912-13.

This railway is about 62 miles in length and extends from the port of Payta (about 500 miles north of Callao) to Piura. Payta (population 2,000) is said to be the driest town in the world, fifteen years having been known to pass without any rainfall. It is, however, a stopping place for the steamers of the Pacific Steam Navigation Company and serves as an outlet for the products of the Piura Valley some miles inland. This section, which owes its fertility largely to the Piura River, rising high in the Andes, is a large producer of cotton, which forms the principal source of traffic for the railway.

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The earnings of this railway for the years 1912-13 and 1911-12 were as follows:

	1912-13		1911-12	
Gross Receipts.....	£36,503	\$182,515	£33,033	\$165,165
Working Expenses....	21,475	107,375	17,396	86,980
Net Receipts.....	£15,028	\$75,140	£15,637	\$78,185

£9,088 (\$45,440) of the Net Receipts for 1912-13, were paid to the Peruvian Corporation representing interest on, and amortization of, the Corporation Debentures served by the Company and a dividend of 7% on the Ordinary Stock of the Company owned by the Corporation.

Pisco to Ica Ry.

This railway is controlled by the Peruvian Corporation, but is worked by Lessees for a consideration of 30% of the Gross Receipts. The line extends from the Port of Pisco, located some distance to the south of Callao, to Ica (or Yca), 46 miles inland. It is the highway by means of which the products of the departments of Ica, Ayacucho and Huancavelica obtain their tidewater outlet. The principal commodities handled are grapes and their products. Ica, its inland terminal, has a population of about 10,000.

The earnings for 1912-13 and 1911-12 were approximately as follows:

	1912-13		1911-12	
Gross Receipts....	£20,240	\$101,200	£20,679	\$103,395
Amount paid Peruvian Corporation	6,071	30,355	6,204	31,020

The Gross Receipts per mile for 1912-13 were \$2,067. The Peruvian Corporation contemplates the building of a line from Lima via Chinca to Pisco.

Southern Ry. of Peru.

This railway, which is controlled and operated by the Peruvian Corporation, has its tidewater terminal at Mollendo, which ranks second only to Callao in its importance as a Peruvian Port. Mollendo is located near the southerly end of the Republic, and though its harbor is a poor one, and its population not large (less than 5,000), it is the great shipping place for the tablelands of Southern Peru and the regions about Lake Titicaca. The railway runs south for some miles along the beach to Mejia and then zigzags its way eastward and northeastward, through a thinly settled arid country, until at a height of about 7,500 feet above the ocean, Arequipa, the second largest city of Peru (population about 40,000), is reached (107 miles from Mollendo). Beyond this point the traffic becomes lighter, but it is still sufficient to pay and a semi-weekly passenger train service is maintained to connect the Pacific Steam Navigation Company's steamers from Callao and other points with the interior. The line after leaving Arequipa resumes its upward climb,

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following the trails of the Incas marked out previous to the Spanish Conquest, until Juliaca, the junction of the branch to Lake Titicaca is reached. From this point (about 307 miles from Mollendo) the railway follows the table-land northward, passing among other places the towns of Tirpata, Santa Rosa and Sicuani, and climbing through the passes of La Roya (altitude 14,518 feet) and Crucero (altitude 14,666 feet) to Cuzco (206 miles from Juliaca). The country about the latter city is, owing to irrigation, highly productive and the railway which has but recently been completed to this section should greatly assist in its wider development. Cuzco itself has a population of about 25,000 and is probably the oldest city of South America, having been the capital of the ancient Peruvian Empire. This new extension earned about .08% on the cost of construction during 1912-13.

The Lake Titicaca branch extends to Puno at the northern end of the lake, (29 miles from Juliaca), from which place a line of steamers, operated by the Peruvian Corporation, runs across to Guaqui on the Bolivian shore. Lake Titicaca, the highest large body of water in the world, is 12,900 feet above the sea level, is 165 miles in length and has a maximum width of 60 miles.

The earnings of the Southern Ry. of Peru for 1912-13 and 1911-12 were as follows:

	1912-13		1911-12	
Gross Receipts.....	£356,674	\$1,783,370	£354,190	\$1,770,950
Working Expenses....	223,707	1,118,535	226,676	1,133,380
Net Receipts.....	£132,967	\$664,835	£127,514	\$637,570

£128,003 (\$640,015) of this Company's earnings for 1912-13 were paid to the Peruvian Corporation, which owns £2,224,800 (\$11,114,000) of its stock.

This railway carried in 1912-13, 587,818 passengers and 140,351 tons of freight, as against in 1911-12, 622,617 passengers and 136,734 tons of freight. The decrease in the receipts from passenger traffic was only £390 (\$1,950) the falling off being in local traffic due to the electrification of a tramway between Arequipa and Tringo.

The sum of £17,206 (\$86,030) was charged against the Revenue for 1912-13, in connection with the work of relaying the line between Arequipa and Puno-

The total mileage in operation during 1913 totalled 535 miles, this being the longest railway line in Peru. The gauge is 4 ft. 8½ in. An extension is proposed to the Madre de Dios River.

Trujillo Ry.

The Trujillo (or Truxillo) Ry. connects the town of that name (population about 12,000) and the country to the north of it, with Salaverry, the port of entry for the state of Libertá, quite an important port, although its harbor is but a rough open roadstead, protected by jetties, and is located about 250 miles north of Callao. The railway runs through Trujillo to Huanchaco, Chocope, Chicama, Ascope, etc., upwards of 53 miles. Sugar and rice form the principal commodities handled.

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The earnings of this railway for the years 1912-13 and 1911-12 were as follows:

	<u>1912-13</u>		<u>1911-12</u>	
Gross Receipts.....	£62,078	\$310,390	£57,636	\$288,180
Working Expenses....	35,830	179,150	32,719	163,595
Net Receipts.....	£26,248	\$131,240	£24,917	\$124,585

Of the Net Receipts for 1912-13, £18,891 (\$94,455) were paid to the Peruvian Corporation, owners of £439,993 (\$2,199,965) Trujillo Ry. Ordinary Stock.

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URUGUAY.

On the pages following is to be found descriptive matter relating to several of the principal railways now in operation or under construction in the Republic of Uruguay. The principal existing system is the Central Uruguay, which, with its main line and various extensions, operated on June 30, 1913, a total of 975 miles, and through its northern extension has recently opened a connecting line with the Brazil Ry. system. This new international route (opened September, 1913) will serve to establish closer relations between Brazil and Uruguay and will make possible rail communication (except for a change necessary owing to a break in the gauge) between Rio Janeiro, Sao Paulo and Montevideo—another link in the chain of railways between the various republics. There are also two other lines in Uruguay reaching the Brazilian frontier.

The Republic of Uruguay, except for a possible occasional setback, is making good progress and is said to be the richest nation per capita (Argentina only excepted) in the world. The population, December 31, 1912, reached a total of 1,225,914 (area, 72,210 square miles—equal to New England, New Jersey and Delaware combined). The total exports for the year 1912 reached a market value of about £11,285,500 (\$55,000,000). Wool shipments alone for 1912 (80,940,342 kilos) were valued at £5,510,831, as compared with £2,210,848 in 1902 (43,380,447 kilos.) and £1,124,502 (21,235,776 kilos.) in 1882. During the first six months of 1913, 3,240 vessels, representing a total tonnage of 6,387,343, made use of the port of Montevideo, which number will likely be greatly increased in the near future owing to the large quantity of Uruguayan beef to be shipped to the American markets.

At the close of 1911 there were about 1540 miles of railway in operation in Uruguay (total since somewhat increased).

An important new railway system has recently been incorporated under the name of the Uruguay Ry. Co. (see Brazil Ry.), which is to build a line from San Luis on the Brazilian border to Colonia, situated only 26 miles from Buenos Ayres. At Colonia, if plans materialize, docks, etc., will be constructed and arrangements will be made so that large ocean steamers will be able to load and unload. This port was to have been the southern terminus of the proposed "Pan-American Trans-Continental Ry. The plan to build this railway seems to have fallen through and the Government has taken up the enterprise. A reference to this railway contained in the *London Times* (Feb. 24, 1914) is here quoted:

"At the time the Government agreed to rescind the concession of the Pan-American Transcontinental Ry. Co. it entered into a new contract with Messrs. MacArthur Brothers, of New York (who are understood to be closely related to the Pan-American Co. and have the same local representative here), for the building of another south to north line which in a certain measure replaces the line that the Pan-American Co. has failed to build. . . . The proposed line is to run from Florida in a line almost direct north-eastwards to Carpinteria, on the Brazilian frontier. The stipulated maximum cost of

THE RAILWAYS OF SOUTH

construction is to be £5,200 per kilometre, which is to include rolling stock station, and all necessary installations and annexes. The contractors are to receive a commission of 15½% on the real cost of the work and 8% on the real value of the rolling stock. Three years are allowed for the completion of the line, and the contractors will be paid monthly, according to work done, in 5% Railway bonds, which they will receive at 90% of their face value. Nothing is said in the contract as to the exploitation of the line, which therefore remains open for future decision.

"Florida, it may be pointed out, is the goal of the proposed State trunk line from Montevideo, the contract for building which has been allotted to the Farquhar syndicate. Carpinteria is identical with San Luis, the proposed northern terminus of the Pan-American line. Communication could be made thence, *via* Bage, with the Brazilian Railway system, but it is hardly the most convenient point for the purpose. The length of the line may be roughly estimated at 300 kilometres, or 186 miles. After leaving Florida it does not touch a single town of the least importance, but passes through a very thinly populated pastoral district, unable, at present, at all events, to offer it remunerative traffic. Its only apparent value is that, some future day, it may afford communication between Montevideo and Brazil over State-owned lines in competition to that already established over the English-owned railways."

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Central Uruguay Ry. of Monte Video.

Avg. Miles				Avg. Miles			
Year	Oper.	Gross Receipts		Year	Oper.	Gross Receipts	
1911-12	966	\$5,665,745	£1,133,149	1912-13	*975	\$6,216,965	£1,243,393

*Includes Central Uruguay Ry. (including North Eastern Line), 271 miles; C. U. Northern Extension Ry., 182 miles; C. U. Eastern Extension Ry., 311 miles; C. U. Western Extension Ry., 211 miles.

Stock Outstanding				Bonds Outstanding			
June 30, 1913				June 30, 1913			
Ordinary.....		\$10,000,000		*Deb. Stock (6%).....		\$6,777,970	
Preference (5½%).....		2,500,000		Western Extension Deb.			
				(4%).....		4,791,000	

*Permanent 6% Debenture Stock, £1,105,594; 6% Second Debenture Stock, £250,000.

Capitalization			
(Central Uruguay Ry.—Original Line)			
	Total	Per Mile	
Stock.....	\$12,500,000	\$12,820	
Bonds.....	11,568,970	11,866	
Total.....	24,068,970	24,686	

Fixed Charges below include \$1,210,035 (£242,007) representing the Traffic Receipts of Extension Companies (Gross, £505,249) less the amount retained by the Central Ry. of Uruguay, Original Line from the Gross Receipts of Extension Companies in accordance with their Working Agreement (£263,242). (See Notes.) Fixed Charges also include \$280,000 (£56,000) rent paid to June 30, 1913, and \$17,845 (£3,569) due Government on account of guarantees advanced to the North Eastern of Uruguay Ry.

Income Account Year Ending June 30, 1913

(Central Uruguay Ry. System)

Average miles operated, 975.			
	Total	Per Mile	
Gross Receipts.....	\$1,243,393	\$6,216,965	\$6,376
Operating Expenses.....	669,008	3,345,040	3,431
Net Receipts.....	574,385	2,871,925	2,945
Other Income.....	39,536	197,680	203
Total Net Income.....	613,921	3,069,605	3,148
Fixed Charges.....	428,179	2,140,895	2,195
Surplus.....	185,742	928,710	953

Operating Expenses

	Total	Per Mile	
Maintenance of Way.....	£184,800	\$924,000	\$948
Maintenance of Equipment.....	240,963	1,204,815	1,236
Traffic, Telegraph and Transportation Expenses..	166,788	833,940	855
General and Miscellaneous Expenses.....	76,457	382,285	3,392

Ratio of Operating Expenses to Gross Receipts, 53.8 per cent.

Other Income above includes \$164,055 (£32,811) interest on 6% Debenture Stock of Central Uruguay Western Extension Ry.

Appropriation of Gross Income

	1912-13	
For Maintenance Expenses.....	33.2%	
For Traffic, Transportation and General Expenses.....	19.0%	
For Fixed Charges.....	33.3%	
For Surplus.....	14.5%	
	100.0%	
	1912-13	
Ton miles per mile of road.....	156,394	

THE RAILWAYS OF SOUTH

NOTES

This company operates a system of railways located wholly in Uruguay. The Combined System as it exists to-day operates by far the largest railway mileage in the Republic.

The System is operated in four sections as follows:

1.	Central Uruguay Ry. (including North Eastern Line).....	271 Miles
2.	“ “ Northern Extension Ry.....	182 “
3.	“ “ Eastern Extension Ry.....	311 “
4.	“ “ Western Extension Ry.....	211 “

The Northern, Eastern and Western Extensions are worked by the Central Uruguay Ry. proper on a percentage basis.

The Earnings of the four companies for 1912-13, stated separately, were as follows:

(1) CENTRAL URUGUAY MAIN LINE (Including North Eastern Line)

Gross Earnings.....	£738,143	*\$3,690,715
Oper. Expenses.....	405,766	2,028,830
Net Profit.....	332,377	1,661,885
Other Income.....	39,536	197,680
Total Income.....	371,913	1,859,565
Fixed Charges.....	186,171	930,855
Surplus.....	185,742	928,710

*Equal to \$13,629 per mile of road operated.

(2) CENTRAL URUGUAY NORTHERN EXTENSION RY.

Gross Earnings.....	£147,143	*\$735,715
Total Net Income.....	80,117	400,585
Surplus.....	24,997	124,995

*Equal to \$4,043 per mile of road operated.

(3) CENTRAL URUGUAY EASTERN EXTENSION RY.

Gross Earnings.....	£251,712	*\$1,258,560
Total Net Income.....	137,501	687,505
Surplus.....	60,428	302,140

*Equal to \$4,047 per mile of road operated.

(4) CENTRAL URUGUAY WESTERN EXTENSION RY.

Gross Earnings.....	£106,394	*\$531,970
Net Profit.....	37,328	†186,640

*Equal to \$2,521 per mile of road operated.

†To meet the interest and sinking fund on the £812,600 Debenture Stock, which are entitled to 4% fixed interest and an additional 2% (cumulative) if earned, the Central Uruguay Ry. advanced to the “Western Extension Ry.” in 1912-13, \$28,455 (£5,691), in accordance with the terms of the Working Agreement. The “Western Extension Ry.” owes to the parent company for advances \$1,054,400 (£210,880), and further owes to the holders of the 6% Debenture Stock (see following) \$1,077,265 (£215,453) account of arrears of interest. The \$1,316,210 (£263,242) retained by the Central Ry. proper, from the \$2,526,245 (£505,249) Gross Receipts for 1912-13 of the Eastern, Northern and Western Extension Companies under the Working Agreements, represented 52.1% of their total Gross Receipts for the fiscal year.

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The main line of the Central Uruguay traverses the middle of the country from Montevideo to Santa Izabel, a short distance beyond the Rio Negro. Around Montevideo, the district for a radius of about 50 miles is highly cultivated, producing in addition to grain and cattle considerable quantities of wine and fruit. It is perhaps the most populous part of Uruguay, the towns of Guadeloupe, Pando, Las Piedras, and Santa Lucia each having between 8,000 and 9,000 inhabitants. From the last-named a short branch, crossing the Santa Lucia river on the longest railway bridge in Uruguay, runs to San Jose, an agricultural centre with 13,000 inhabitants, where the Western Extension begins. An important item of traffic on this branch is the sand taken from the Santa Lucia river.

Continuing north and west the route of the main line lies through Florida, a city with a population of nearly 11,000, and an agricultural centre. Thence, to Santa Izabel, the country served is almost exclusively pastoral, Durazno, the principal town, having approximately the same population as Florida.

The North-Eastern line connects Montevideo and Minas, the capital of the department of the same name. Population about 15,000.

THE NORTHERN EXTENSION.

This is a prolongation of the Central of Uruguay main line from Santa Izabel to the Brazilian frontier at Rivera, 182 miles. The region is much more scantily populated than in the south. Cardoso, which began existence as a German colony; Tambores, a center for cattle and wool, and Tacuar-embo, a town of 10,000 inhabitants, are important stations. Across the frontier from Rivera is the Brazilian town of Sant' Anna do Livramento, whose five large jerked-beef factories (*saladeros*) furnish a large proportion of the traffic. A link line of three rails connects the terminus of the Northern Extension with that of the Sao Paulo-Rio Grande Ry. (1-meter gauge), and is expected to stimulate increased traffic in the shape of timber from the forests of Southern Brazil. At present, however, pastoral products form the bulk of the freight traffic.

THE EASTERN EXTENSION.

The Central Uruguay Eastern Extension Ry's. line starts from a point on the North-Eastern line, 20 miles out of Montevideo, and runs north and east to Melo, with a branch, completed in October, from Nico Perez to Treinta-y-Tres.

Most of the country served by this extension is well wooded and watered, and large tracts of it are suitable for agriculture, which, in the vicinity of the railway, is a rapidly growing industry, though pastoral products still form the chief source of traffic. Melo, the capital of the *department* of Cerro Largo, has a population of some 14,000 inhabitants and Treinta-y-Tres, capital of the department of the same name.

THE WESTERN EXTENSION.

From San Jose the Western Extension traverses largely an agricultural country. There is a branch from Mal Abrigo to Colonia. From Bizcocha it descends through pastoral country into Mercedes, a town of some 10,000 inhabitants on the Rio Negro. Mercedes has a large jerked-beef factory, and also produces a quantity of charcoal. Timber and stone are other traffic items.

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The branch to Colonia serves the Colonia Suiza, a Swiss colony founded 50 years ago, and now a flourishing center of the dairying industry.

The Preference Stock of the Central Uruguay Ry. is entitled to dividends of $5\frac{1}{2}\%$ per annum. Full dividends are being paid. The par value of this class of stock is £10, and the full authorized amount of stock, £500,000, is outstanding.

The Ordinary Stock received from the earnings of 1912-13, $6\frac{1}{2}\%$ in dividends (3%, April; $3\frac{1}{2}\%$, October). £2,000,000 of this stock is outstanding. In addition £2,000,000 £10 shares have been authorized but had not been issued to September, 1913.

The Permanent 6% Debenture Stock and the 6% Second Debenture Stock are authorized to the amounts of £1,200,000 and £250,000 respectively. £1,105,594 and £250,000 (the full authorized amount) of these Debenture Stocks had been issued to June 30, 1913. Interest is payable on the Permanent Debenture Stock in April and October. The Second Debenture Stock is redeemable at par.

The above securities and £1,000,000 Western Extension 4% Debentures constituted the capital of the company as of June 30, 1913. Further borrowing powers amount to £466,666 in addition to the unissued balance of the securities enumerated above.

The North Eastern of Uruguay Ry. which is operated directly by the Central Uruguay, under lease, paid during 1912-13 7% on its \$2,000,000 (£400,000) Preference Shares and 7% on its \$2,000,000 (£400,000) Ordinary Shares. This company has no bonds.

The Central Uruguay Northern Extension Ry. has outstanding \$5,000,000 (£1,000,000) Share Capital, which received $4\frac{3}{4}\%$ in 1912-13 and \$3,135,750 (£627,156) Permanent 5% Debenture Stock. Further borrowing powers amount to £39,516. This company has recently constructed a short line to connect with the Brazilian Railway system. This line was officially opened September 1, 1913. A bridge over the River Uruguay has been completed so that through traffic is now possible between Montevideo and Rio de Janeiro.

The Central Uruguay Eastern Extension has outstanding \$4,300,000 (£860,000) Ordinary Shares and a like amount of the 5% Preference Shares. \$4,500,000 (£900,000) of each class is authorized. There is also outstanding \$5,382,105 (£1,076,421) of \$5,733,330 (£1,146,666) authorized 5% Permanent Debenture Stock. The full dividend of 5% was paid on the Preference Stock and $4\frac{3}{4}\%$ was paid on the Ordinary Stock.

The Central Uruguay Western Extension has not proven as profitable as the other lines comprising the System. Its earnings are growing, however, as during the period from 1903-4 to 1912-13 the total Receipts have increased from £41,360 to £106,394 and the Net Receipts from £8,272 to £37,238.

The operated mileage during the ten year period has remained unchanged.

No dividends are being paid on the \$4,249,000 (£849,800) stock of the Western Extension Ry. Of this stock, \$3,611,150 (£722,230) is owned by the Central of Uruguay, as is also \$4,063,500 (£812,700) (entire issue) of the former's 6% Debenture Stock. These securities were received by the parent

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company together with \$185,500 (£37,100) Debenture Stock since redeemed, in consideration for Capital Expenditure to the amount of \$6,486,890 (£1,297,378), financed largely by the sale of £1,000,000 4% Western Extension Debentures, £41,800 of which have been retired by Sinking Fund and cancelled. The \$4,063,500 (£812,700) Debenture Stock of the Western Extension Ry. bears interest at the rate of 6% per annum, 4% of which is fixed. (See preceding paragraph.)

The terminals and the passenger station at Montevideo owned by the Central Uruguay are well located and are of great value. Practically all of the exports and imports of Uruguay go through this port and the "Central" handles a very large portion of this traffic. Large quantities of cattle and of cereals for export and for the markets of Montevideo, are brought from the interior which in turn takes the manufactured articles, building material, etc., imported from the United States and Europe. The railway has played an important part in the rapid development of the Republic.

Midland Uruguay Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1911-12	283	\$582,350 £116,470	1912-13	291	\$682,112 £136,422
Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913		
Common		\$3,000,000	Deb. Stock (6%)		\$8,961,275

Capitalization

	Total	Per Mile
Stock	£600,000 \$3,000,000	\$10,309
Bonds	1,792,255 8,961,275	30,795
Total	2,392,255 11,961,275	41,104

Fixed Charges below include \$68,420 (£13,685) paid account of Sinking Fund.

Income Account Year Ending June 30, 1913

Average miles operated, 291.

	Total	Per Mile
Gross Receipts	£136,422 \$682,112	\$2,344
Operating Expenses	97,433 487,164	1,674
Net Receipts	38,989 194,948	670
Other Income	70,892 354,458	1,218
Total Net Income	109,881 549,406	1,888
Fixed Charges	109,881 549,406	1,888
*Surplus		

Operating Expenses

Maintenance of Way and Telegraph	£27,569 \$137,844	\$474
Maintenance of Equipment and Loco. Pwr.	36,152 180,760	621
Traffic Expenses	21,549 107,745	370
General Expenses	12,163 60,815	209

Ratio of Operating Expenses to Operating Revenues, 71.5 per cent.

*No surplus was earned in 1912-13. However the sum of \$21,392 (£4,278) was credited to Income, being the balance carried forward from last year's account. From this amount \$20,000 (£4,000) was transferred to Special Reserve Fund for Maintenance.

Other Income above includes \$354,460 (£70,892) Guarantee from the Government of Uruguay.

Appropriation of Gross Income

	1912-13
For Maintenance Expenses	30.7%
For Traffic, Transportation and General Expenses	16.3%
For Fixed Charges	53.0%
For Surplus	0.0%
	100.0%

THE RAILWAYS OF SOUTH

NOTES

This railway starts at Paso de los Toros (on the Central Uruguay) located near Rio Negro, the capital of the province of that name, and runs northward and westward. At Tres Arboles junction is afforded with a 36-mile branch completed in April, 1913, and known as the Midland Uruguay Extension Ry., which runs to Piedra Sola where it joins the Central Uruguay System. At Algorta to the westward, a branch 87 miles in length, constructed within the last two years, leaves for the Lemco Company's port, town and factories of Fray Bentos, where on an average about 175,000 head of cattle are slaughtered annually. From Algorta the main line continues on to Paysandu, (next to Montevideo in commercial importance) and thence due north to Salto. Paysandu and Salto have each over 20,000 inhabitants.

The branch to Fray Bentos, which has been operated since July, 1911, has increased the working results of the system.

No dividends are paid on the Ordinary Stock.

The £586,330 5% Prior Lien Debenture Stock will be wholly redeemed at par by Sinking Fund operations by 1947. £13,670 of this Debenture Stock had been redeemed on June 30, 1913, as had £44,075 of the £1,250,000 5% Debenture Stock. The capital authorized by the company has all been issued.

North Western of Uruguay Ry.

This company, incorporated 1882, has outstanding the following securities:

Ordinary Stock.....	£120,120	\$600,600
First Preferred Stock 6% (non-cum.).....	583,850	2,919,250
Second Preferred Stock 5% (non-cum.).....	293,173	1,465,658
Perpetual Debentures (1882 issue).....	400,000	2,000,000
Second Debentures 6% (red. 110).....	53,375	266,875
	<hr/> £1,450,518	<hr/> \$7,252,590

Dividends have been paid on the First Preference Stock in recent years as follows:

1905-6	1906-7 to 1908-9	1909-10	1910-11 and 1911-12	1912-13
1%	2% annually	2½%	3% annually	2½%

No dividends are being paid on the Second Preference and Ordinary Stocks.

From Salto, between which point and Monte Caseros rapids render the River Uruguay unnavigable, the North-Western of Uruguay Ry. runs west and north to the Brazilian frontier at Quarahim, where the river of the same name separates it from the Brazil Great Southern Ry. (metre gauge). Communication between them is at present effected by ferry-boat, but within a few months the river should be spanned by a lengthy international bridge, now being built by a company in which both lines are interested. (See Brazil Great Southern Ry.) The length of the North-Western is 113 miles.

The country served is agricultural and pastoral, and is particularly well timbered, while many districts are rich in minerals. The line carries, espec-

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ially, sheep to the Montevideo refrigerating plants and cattle to Fray Bentos, and the bulk of the remaining traffic is made up of agricultural products. At Zania Honda the company have founded an agricultural colony which promises to do well.

The working results show a steady increase of traffic. For 1910-11 and 1911-12 they were as follows:

	Gross Receipts.	Expenditure.	Profit.
1910-11.....	\$352,440	\$246,565	\$105,875
1911-12.....	372,995	248,585	124,410

The railway operates under a Government Guarantee. The property belongs to the company in perpetuity.

Uruguay East Coast Ry.

This line, 78 miles in length, starts from Olmos, a point on the Central Uruguay North-Eastern Ry., and has its terminus at Maldonado, a coastal town in the department of the same name. Much of its traffic is due to the fact that Punta del Este and Piriapolis, close to Maldonado, are seaside resorts for the people of Montevideo and Buenos Ayres, but the railway also serves a good pastoral and agricultural country. The prospects of this short line have been distinctly favorable since the opening, in December, 1910, of its extension from La Sierra to the coast. The railway has under consideration an extension from San Carlos on the main line northward to Rocha. From the fishery lately established in the vicinity of Maldonado an important item of traffic may possibly be developed. The East Coast Ry. enjoys a guarantee from the Government, who have the right to purchase the line under certain conditions on terms favorable to the railway. Working results for 1910-11 and 1911-12, were approximately as follows:

	Gross Receipts	Expenses	Net Receipts
1910-11.....	\$128,218	\$99,604	\$28,614
1911-12.....	176,607	143,443	33,164

The 1912-13 earnings were not available at the date of going to press. The Surplus after Interest, Sinking Funds, etc., amounted to \$1,680 (£336).

The company's capital at June 30, 1913, was as follows:

Stock (par £1).....	£124,640	\$623,200
*First Charge 5% Debentures.....	316,000	1,580,000
Perpetual 4% Debenture Stock.....	184,980	924,900
Total Capital.....	£625,620	\$3,128,100

*Interest April and October; principal repayable within 37 years by a Sinking Fund which purchases bonds in the open market at par or less or draws the same at par.

The Uruguay Ry. is to build a branch to connect with this line.

THE RAILWAYS OF SOUTH Uruguay Northern Ry.

Year	Avg. Miles Oper.	Gross Receipts		Year	Avg. Miles Oper.	Gross Receipts	
1911-12	71	\$139,930	£27,986	1912-13	71	\$150,985	£30,197

Stock Outstanding June 30, 1913				Bonds Outstanding June 30, 1913	
Common.....		\$500,000		Debenture Stock.....	\$2,492,010
*Preferred (7%).....		1,250,000			

*Cumulative.		Capitalization	Total	Per Mile
Stock.....			£850,000	\$1,750,000
Bonds.....			498,402	2,492,010
Total.....			848,402	4,242,010
				59,747

Income Account Year Ending June 30, 1913

Average miles operated, 71				Total	Per Mile
Gross Receipts.....				£30,197	\$150,985
Operating Expenses.....				19,230	96,150
Net Receipts.....				10,967	54,835
Other Income.....				16,897	84,485
Total Net Income.....				27,864	139,320
Fixed Charges.....				22,592	112,960
Surplus.....				5,272	26,360
					371

Operating Expenses				Total	Per Mile
Maintenance of Way and Telegraph.....				£6,164	\$30,820
Maintenance of Equipment and Locomotive Power.....				6,199	30,995
Traffic Expenses.....				3,474	17,370
General Expenses.....				3,393	16,965
					239

Ratio of Operating Expenses to Gross Receipts 63.7 per cent.

Other Income above includes \$84,480 Guarantee from the Government of Uruguay (less Income Tax). See Notes regarding this guarantee.

Appropriation of Gross Income		1912-13
For Maintenance Expenses.....		26.2%
For Traffic, Transportation and General Expenses.....		14.6%
For Fixed Charges.....		48.0%
For Surplus.....		11.2%
		100.0%

NOTES.

This company has outstanding stock and debentures as follows:

Outstanding.		
Ordinary Stock (par £20).....	\$500,000	£100,000
7% Cumulative Pfd. Stock.....	1,250,000	250,000
Perpetual Debenture Stock.....	2,247,000	449,400
5% Prior Lien Deb. Stock.....	245,010	49,002

No dividends are being paid on the ordinary stock. 2% was paid on the preferred stock in 1912-13 as against 1¼% paid in 1911-12. The preferred stock is entitled to cumulative dividends up to 7% per annum. To June 30, 1913, \$1,702,115 (£340,423) dividends were in arrears; these dividends being repayable out of future profits (if earned).

The Perpetual Debenture Stock is entitled to 3½% fixed interest and to ⅔ of any net profits up to £8,561 12s. 10d. per annum. This profit (£5,707 15c. 2d.) and the 3½% made the total interest for the year £4 15s. 4d.

AND CENTRAL AMERICA

The payments made by the Government on account of the Guarantee (which expires 1925) are repayable out of the company's net earnings in excess of 6% on \$25,000 (£5,000) per kilometer on a total length of 114 kilometers (71 miles). The interest on the Perpetual Debenture stock will revert to 5% (the original rate) when the guarantees are all repaid. The maximum annual guarantee by the Government under the terms of the agreement is £19,985.

The 5% Prior Lien Debenture Stock has been issued to the amount of £60,000 of which £10,998 had been redeemed to June 30, 1913, and was held in trust for the Company.

£10,000 6% Perpetual Debenture Stock was formerly outstanding, but has been redeemed and is held in trust for the company. An additional £15,000 of this Debenture Stock is authorized but has never been issued.

The Uruguay Ry. (controlled by the Brazil Ry.) had in 1913 a large interest in this property.

This railway extends from Isla de Cabellos, on the Northwestern Ry. of Uruguay, to San Eugenio, on the frontier with Brazil. The latter town (population about 11,000) is the center for a large cattle district, there being several jerked beef factories in or near the place.

THE RAILWAYS OF SOUTH

VENEZUELA.

NOTES.

Venezuela, having a population of 2,800,000, is not well provided with railway facilities. This country at the close of 1912 had less than 550 miles of railway; one to every 1,150 square miles, the total area of the country being about 594,000 square miles. The large coast line and the Orinoco, with its many tributaries, are partially responsible for this. However, the Republic has room for a considerably larger mileage of railway lines.

A summary of the Venezuelan railway situation in 1912 is given by the following table:

Railways.	Mile- age.	Pass. carried.	Freight <i>Tons.</i>	Gross revenue.	Expenses.
*La Guaira and Caracas.....	23	78,565	61,570	\$494,427	\$217,257
Great Ry. of Venezuela....	111	194,840	46,917	531,257	299,692
Maiquetia to Macuto.....	5	77,382	None.	14,633	11,635
*Venezuela Central Ry....	34	215,367	28,816	122,788	77,866
*Puerto Cabello & Valencia	34	28,042	34,861	202,839	107,995
*Bolivar.....	109	19,933	38,733	458,399	265,080
Carenero.....	34	11,594	7,009	32,629	31,889
La Vela & Coro.....	8	731	3,207	7,489	7,087
Guanta.....	25	4,248	2,837	13,544	15,421
La Ceiba.....	51	5,974	23,205	201,888	112,405
Tachira.....	71	8,139	25,390	357,218	167,660
Santa Barbara & El Vigia...	23	5,678	11,914	68,909	38,071
Total.....	528	650,493	284,459	\$2,506,020	\$1,352,058

The four railways enumerated (*) are fully described elsewhere. The earnings as stated in the annual reports of these four companies vary slightly from the figures given above.

The Great Ry. of Venezuela (a German owned line), extends from Caracas, the Capital, along the high mountain slopes of Las Mostazas and through the valley of Aragua to Valencia. There are about 212 bridges and 86 tunnels along the line, the construction of which was very costly. The railway handles a fair amount of produce raised along the line and shipped to Caracas; Valencia, Victoria, etc.

The Maiquetia to Macuto Ry. extends from the suburbs of La Guaira to Macuto, the principal seaside resort of Venezuela. It handles passenger traffic only.

The Carenero Ry. (built in 1884), connects the port of Carenero (to the East of Caracas) with the towns of Higuerote, Rio Chico and Guapo. Cattle form its principal source of traffic although coffee, cocoa and other tropical products are handled in fair quantities.

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The La Vela & Coro Ry. (owned locally), is a small unimportant line, operating from the town of Coro to the port of La Vela in the northwestern part of the country. The traffic handled by this road is very light.

The Guanta Ry. (not a particularly profitable line) connects the port bearing that name (eastward of La Guaira) with Barcelona, a city of 15,000 inhabitants, (a place of some importance), and the coal mines of Naricual.

The La Ceiba Ry. extends from the port of Ceiba on Lake Maracaibo in an easterly direction to Motatan in the State of Merida. This line, (built in the early eighties by French engineers but owned locally), is about 50.5 miles in length, and earns approximately \$8,000 per mile gross.

The Tachira Ry. (another locally owned line), was built in 1893, and ranks third in mileage and fourth in gross earnings among the railways of Venezuela. It extends from Encontrados on the Catatumba River (a tributary of Lake Maracaibo) to Uraca, near the boundary line with Colombia, and has but few heavy grades, passing as it does through an easy country. The district served is a rich one, capable of considerable development, and there is also handled traffic destined for Cauca and other points in Colombia.

The Santa Barbara El-Vigia line is 23 miles in length and operates between these two points. An extension is projected to Merida. For a while this railway was practically abandoned, but operations are now being carried on with some success.

There is, in addition to the above mileage, a small line 5 or 6 miles long, extending from the port of Guanaco in the Delta of the Orinoco River to the Venezuelan Pitch Lake, which covers over 1,000 acres, and from which is taken 25,000 tons of asphalt annually. The railway is owned by the New York & Bermudez Co.

About \$40,000,000 is said to be invested in Venezuelan Railways.

The foreign trade of Venezuela for 1912 consisted of \$25,260,908 exports and \$20,568,939 imports.

THE RAILWAYS OF SOUTH

Bolivar Ry.

Year	Avg. Miles Oper.	Gross Receipts
1912-13	110	\$519,041 £103,808
Stock Outstanding June 30, 1913		
Common.....	\$3,416,000	
Preferred (5%).....	1,464,000	
Debenture Stock Outstanding June 30, 1913		
Debenture Stock (6%).....		\$1,250,000

Capitalization		Total	Per Mile
Stock.....	\$976,000	\$4,880,000	\$44,364
Debenture Stock.....	250,000	1,250,000	11,363
Total.....	1,226,000	6,130,000	55,727

Income Account Year Ending June 30, 1913			
Average miles operated, 110.			
	Total		Per Mile
Gross Receipts.....	£103,808	\$519,041	\$4,718
Operating Expenses.....	41,531	207,654	1,888
Net Receipts.....	62,277	311,387	2,830
Other Income.....	2,854	14,271	130
Total Net Income.....	65,131	325,658	2,960
Fixed Charges.....	15,390	76,949	700
*Surplus.....	49,741	248,709	2,260

Operating Expenses		
Maintenance of Way.....	\$8,988	\$44,941
Workshop Maintenance.....	4,165	20,824
Traffic, Transportation and General Expenses....	28,378	141,899

Ratio of Operating Expenses to Gross Receipts, 40.0 per cent.
 *This Surplus before deducting \$25,000 (£5,000) appropriated to Reserve for Renewals and \$25,000 (£5,000) reduction of Estate Development Expenditure.
 Other Income above includes \$752 (£114) Net Earnings from Operations of Steamers and Wharf dues, \$4,547 (£919) Sundry Receipts. The Gross Receipts from Operation of Steamers (£7,135) and Wharf Dues (£220) were \$36,776 and the Expenses including cost of Operation, Steamers, Launches and Lighters Insurance, etc., were \$36,004 (£7,241).

Appropriation of Gross Income		1912-13
For Maintenance Expenses.....		12.3%
For Traffic, Transportation and General Expenses.....		26.6%
For Fixed Charges.....		14.5%
For Surplus.....		46.6%
		100.0%

NOTES.

The Preference Shares are entitled to receive non-cumulative dividends at the rate of 5% per annum in priority to the Ordinary Shares. The full dividend is being paid on the Preference Shares, and in 1912-13, 2% was paid on the Ordinary Shares. \$1,500,000 and \$3,500,000 of the two classes of stock are authorized of which \$1,464,000 (£292,800) and \$3,416,000 (£683,200) are outstanding.

The Debenture Stock bears interest at the rate of 6% per annum and is secured by a first charge on the Company's property. \$2,000,000 (£400,000) is authorized of which \$1,250,000 (£250,000) was outstanding June 30, 1913.

This Company operates a line of railway from the port of Tucacas on the Caribbean Sea to Barquisimeto, an interior city of some 40,000 inhabitants. The line was originally built from Tucacas to the Quebrada (now Aroa) Copper Mines (about 50 miles). Later this line was amalgamated with the Southwestern Ry. of Venezuela which was practically an extension of the

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Bolivar Ry. (then known as the Quebrada Ry. and Copper Co.) operating from a point near the terminus of the latter to Barquisimeto. A branch line (the San Felipe Branch) is under construction; will be about 28.5 miles in length, and will pass through what is believed to be the richest valley in Venezuela.

After leaving Barquisimeto, which is a center for the produce of the Northern Andine Country, the railway begins a gradual climb until Duaca (a small town) is reached. From this point a valley capable of considerable cultivation is traversed. At El Hacha, where the branch to the Aroa mines joins the main line, the traffic is greatly increased, owing to the large shipments of copper ore which are sent to Tucacas. A portion of the line passes through wild virgin forest country, which, back a short distance from the railway, is virtually an unexplored wilderness.

The Bolivar Ry. owns an estate of about 250,000 acres granted by the Government of Venezuela. The estate is to be developed fully in the near future. In 1912-13 \$51,170 (£10,234) was expended towards the development of the estate.

A steamer, the "Barquisimeto," and about ten barges, lighters, etc., are owned and operated by this Company. The results of the operations of the steamers, etc., will be found on the table page. The steamer is a necessity owing to the fact that Tucacas is not a custom port.

The principal commodities handled by the railway in 1912-13 were copper ore (17,236 tons) and coffee (7,891 tons).

As of June 30, 1913, the balance sheet showed cash and bills receivable \$277,823 (£55,565), general stores \$188,768 (£37,754) and other Current Assets. Current and Accrued Liabilities were \$46,952 (£9,390). \$100,000 (£20,000) was reserved for Renewals.

THE RAILWAYS OF SOUTH

La Guaira & Caracas Ry.

Year	*Avg. Miles Oper.	Gross Receipts	Year	*Avg. Miles Oper.	Gross Receipts
1911	23	£81,805 \$409,027	1912	23	£101,457 \$507,287

*Gauge, 3 feet.

Note: The Gross Receipts for 1913 were £106,500 (\$532,500).

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Ordinary.....	\$1,750,000	Deb. Stock (5%).....	\$1,850,000

Capitalization		Total	Per Mile
Stock.....	£350,000	\$1,750,000	\$76.087
Debenture Stock.....	370,000	1,850,000	80.417
Total.....	720,000	3,600,000	156.504

Income Account Year Ending December 31, 1912			
Average miles operated, 23.		Total	Per Mile
Gross Receipts (1913 £106,500).....	£101,457	\$507,287	\$22.056
Operating Expenses.....	44,581	222,908	9.692
Net Receipts.....	56,876	*284,379	12.364
Other Income.....	1,874	9,372	4.08
Total Net Income.....	158,750	293,751	12.772
Fixed Charges.....	19,301	96,507	4.196
†Surplus.....	39,449	197,244	8.576

Operating Expenses			
Maintenance of Way.....	£9,800	\$49,000	\$2.130
†Maintenance of Equipment.....	6,097	30,487	1.326
Traffic and Transportation Expenses.....	19,793	98,962	4.303
General Expenses.....	8,891	44,459	1.933

Ratio of Operating Expenses to Gross Receipts, 41.1 per cent.

*\$190,980 (£38,196) previous year.

†This Surplus before deducting \$40,000 (£8,000) added to Reserve Fund and \$10,000 (£2,000) transferred to an account against Depreciation in Securities.

‡In the annual report this Account is styled "Locomotive Expenses." The total (£14,044) included £7,946 account "Locomotive Running." In this table the latter amount is included under Traffic and Transportation Expenses.

Appropriation of Gross Income		1912
For Maintenance Expenses.....		15.4%
For Traffic, Transportation and General Expenses.....		27.8%
For Fixed Charges.....		18.7%
For Surplus.....		38.1%
		100.0%

	1912	1911
Ton miles per mile of road.....	75,600	58,728
Passenger miles per mile of road.....	67,653	68,253

NOTES.

This company has authorized and has outstanding \$1,850,000 (£370,000) 5% Debenture Stock, also 35,000 shares of a par value of \$50 (£10) each (\$1,500,000) of Ordinary Stock. On December 23, 1912, an interim dividend of 3%, a further dividend of 4% and a bonus of 1% was declared (total 8%) out of the earnings of the calendar year 1912.

The railway (gauge 3 feet) operates between La Guaira, the principal port of Venezuela, and Caracas, the capital (population 1912, 273,000). The railway, although only 22¾ miles in length, is one of the most important lines in the Republic. The cost of the building of this short line was said to have

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been in excess of \$4,000,000. There are ten bridges and nine tunnels along the route which is almost a continuous steep incline from the coast to the capital, the climb being about 5,000 feet, followed by a descent to 2,984 feet, the altitude of the Caracas station. The maximum grade is 4% and the sharpest curve is about 43% radius. It would be almost impossible to duplicate the railway owing to the nature of the country. The company, while it receives no guarantees from the Venezuelan Government, has a 99-year monopoly on the traffic between La Guaira and Caracas and will retain the property in perpetuity.

In addition to the payment of the dividend as stated above, the company in 1912 added to Reserve Accounts, \$40,000 (£8,000), and transferred to an account against depreciation of securities \$10,000 (£2,000).

The Balance Sheet as of December 31, 1912, showed Supplies and Furniture on Hand, \$82,218 (£16,444); Investments at Cost, \$164,273 (£32,855); Cash, Bills and Money on Loan, \$256,393 (£51,279), and Sundry Debit Balances \$14,982 (£2,956); total, \$517,668 (£103,534). These compare with Sundry Credit Balances and Accrued Interest, \$89,260 (£17,852). There were also on that date credit balances to Reserve Account (£26,637) and Improvement and Renewal Account (£29,279) to the amount of \$279,580 (£55,916).

THE RAILWAYS OF SOUTH

Puerto Cabellos & Valencia Ry.

Year	*Avg. Miles Oper.	Gross Receipts	Year	*Avg. Miles Oper.	Gross Receipts
1911	34	\$184,600	1912	34	\$208,083
		£36,920			£41,617

*Gauge 3 ft. 6 in.

Note: The Gross Receipts for 1913 were £43,750 (\$218,750).

Stock Outstanding December 31, 1912	Bonds Outstanding December 31, 1912
Ordinary.....\$2,300,000	*Bonds (5%).....\$950,000
	†Deb. Stock (5%).....850,000

*First Charge (Income) coupon bonds, \$100,000 (£20,000) of which are in the Company's Treasury.

†Second Charge Debenture Stock. Interest payable from Income up to 5%, if earned.

Capitalization	Total	Per Mile
Stock.....	£460,000	\$2,300,000
Bonds and Debenture Stock.....	360,000	1,800,000
Total.....	820,000	4,100,000
		120,588

Fixed Charges below include \$40,561 (£112) Interest on Second Charge (Income) Debenture Stock.

Income Account Year Ending December 31, 1912			
Average miles operated 34.	Total	Per Mile	
Gross Receipts (1913, £43,750).....	£41,617	\$208,083	\$6,120
Operating Expenses.....	25,661	128,303	3,774
Net Receipts.....	15,956	79,780	2,346
Other Income.....	656	3,281	96
Total Net Income.....	16,612	83,061	2,442
Fixed Charges.....	16,575	82,875	2,437
Surplus.....	37	186	5

Operating Expenses			
Maintenance of Way.....	£6,559	\$32,793	\$965
Maintenance of Equipment.....	4,590	22,957	675
Traffic, Telegraph and Transportation Expenses..	8,680	43,402	1,276
General Expenses.....	5,832	29,161	858

Ratio of Operating Expenses to Gross Receipts 61.7 per cent.

Appropriation of Gross Income	
	1912
For Maintenance Expenses.....	26.4%
For Traffic, Transportation and General Expenses.....	34.3%
For Fixed Charges.....	39.2%
For Surplus.....	0.1%
	100.0%

	1912	1911
Ton miles per mile of road.....	27,994	24,038
Passenger miles per mile of road.....	17,169	14,810

NOTES.

No dividends were paid on the Ordinary Stock in 1912 and in 1913. 46,000 shares of £10 each, fully paid, have been issued and are outstanding.

The First Charge Coupon Bonds bear interest at 5% per annum. \$950,000 (£190,000) have been issued of which \$100,000 (£20,000) were on December 31, 1912, in the treasury of the company. These bonds are redeemable at par on 12 months' notice.

AND CENTRAL AMERICA

The Second Charge Debenture Stock, \$850,000 (£170,000) authorized and outstanding, is entitled to interest up to 5% if earned. 4¼% was paid from the Income for the year 1912. There is a contingent liability for deficiency of interest on the Second Charge Debenture Stock which has to be discharged before payment of any dividend upon the Share Capital may be made, excepting out of the Award made by the Anglo-Venezuela Mixed Committee.

There is (the Company's report states) due from the Venezuelan Government the aggregate sum of \$1,435,528 (£287,106) together with interest bringing the total to about \$1,545,000 (£309,000), representing Guarantees for the years 1903 to 1912 inclusive. The efforts of the company to bring about a settlement of this debt have not been successful.

This railway operates between the City of Valencia (population, 40,000) and Puerto Cabello (population, 15,000) on the Caribbean Sea. Valencia is the third city in size and Puerto Cabello the third port in importance in Venezuela. The gauge of the line is 3 feet 6 inches. The district served by the railway is quite fertile and capable of considerable development. Puerto Cabello has an excellent harbor, entirely natural, and is a place of considerable importance. The recent establishment of large meat works at this point should greatly increase the cattle traffic from the Llanos and other parts of the interior and add largely to the earnings of the railway.

With the exception of about 2½ miles, which were built on the cogwheel principle, owing to the steep gradient (about 8%), there were none of the engineering difficulties in the construction of the railway, such as were encountered in the building of the La Guaira & Caracas Ry. There are about 24 bridges and one tunnel along the route and the construction is generally of an excellent character.

The company on December 31, 1912, owned 11 locomotives, 13 passenger train cars and 99 freight and service cars.

THE RAILWAYS OF SOUTH

Venezuela Central Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1906	...	\$31,860	1910	...	\$76,530
1907	...	45,295	1911	...	96,730
1908	...	50,245	1912	*34	125,980
1909	...	58,145			25,196
		11,629			

*Approximate; mileage since increased.

†The Gross Receipts for 1913 were approximately \$147,500 (£29,500); the actual earnings for 11 months were £27,008, as against £22,437 for 11 months in 1912.

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Ordinary	\$1,000,000	*Debentures 1st (6%)	\$601,500
		†Debenture 2nd (6%)	537,400

*Additional First Debentures to the amount of \$20,000 (£4,000) per kilometer were authorized May 29, 1913, to build an extension from Santa Teresa to Ocumare (22 kilometers)
†Interest dependable on Income; no interest was paid in 1912.

	Capitalization	Total	Per Mile
Stock		\$1,000,000	\$29,412
Debentures		1,138,900	33,487
Total		2,138,900	62,909

Fixed Charges below include \$8,133 (£1,627) London Administration Expenses.

Income Account Year Ending June 30, 1913

Average miles operated (approximate), 34.

	Total	Per Mile
Gross Receipts (1913, £29,500)	\$25,196	\$125,980
Operating Expenses	15,968	79,815
Net Receipts	9,233	46,165
Total Net Income	9,233	46,165
Fixed Charges	8,845	44,225
Surplus	388	1,940

Operating Expenses

	Total	Per Mile
Maintenance of Way	*	*
Maintenance of Equipment	*	*
Traffic and Transportation Expenses	*	*
General Expenses	*	*

Ratio of Operating Expenses to Gross Receipts, 63.3 per cent.

*Statistics not available.

Appropriation of Gross Income

	1912-13
For Maintenance, Traffic, Transportation and General Expenses	63.3%
For Fixed Charges	35.2%
For Surplus	1.5%
	100.0%

NOTES.

The stock of this company consists of 200,000 shares of the par value of £1. No dividends are being paid. The full authorized amount is outstanding.

The Debentures of this company are divided into two issues. £155,000 (par £10) of each class, viz.: First and Second Debentures, are authorized, of which £120,300 (\$601,500) and £107,480 (\$537,400) had been issued January, 1913. 6% is being paid on the First Debentures. The Second Debentures are entitled to 6% interest if earned. No interest was paid on these Debentures from the surplus of 1912.

This company operates a railway running from Caracas, the capital of Venezuela, to Santa Lucia, Soapire and Santa Teresa (about 37 miles), with a branch from Ague de Maiz to Dos Caminos. The line from Santa Lucia to

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Soapire and the Dos Caminos branch were opened for traffic in 1912, while the Santa Teresa extension was not completed until late in 1913. An extension has been authorized beyond Santa Teresa (located on the River Tuy) to Ocumare, the capital of the State of Miranda (about 14 miles). Ocumare has a population of about 8,000 and is a center for the traffic of the vast plains, the Llanos, that lie to the southward between the Tuy and Orinoco Rivers. The management estimates that on the completion of this section an annual increase in the net receipts amounting to \$95,000 (£19,000) will result. The cost of this extension and the necessary rolling stock will be approximately \$497,500 (£95,500), which sum will be provided by the sale of 6% First Debentures.

PART II.

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CENTRAL AMERICA, MEXICO
AND PANAMA

RAILWAYS OF SOUTH AND CENTRAL AMERICA

MEXICO.

Mexico stands eleventh among the world's nations in its railway mileage. During the Diaz regime this country, thanks to the far-sightedness of its administration, its wonderful resources and to American, British and other foreign capital, the great republic was striding forward at a rapid pace. Due likewise to foreign capital and the faith of the bankers of other nations in Mexico's future, a readjustment of the finances, etc. and the consolidation of the Mexican Central R. R. and National R. R. of Mexico into the National Rys. of Mexico, was successfully carried out.

Following the successful unification of the two principal highways of commerce in the Republic, and the establishment of good credit, railway building for a while went ahead with leaps and bounds. The Southern Pacific Company laid plans for the building of over 1,500 miles along the West coast (which lines were nearly completed) the North Western Ry. of Mexico, controlled by the Farquhar-Pearson, interests, was completed from opposite El Paso, Texas to Chihuahua, etc., (about 366 miles), the Kansas City, Mexico & Orient Ry. of Mexico, was partly finished, and other lines, north and south were developed or projected. The National Rys. of Mexico merged into its system the Mexican International R. R. and as described in the portion of this chapter containing its statistics, etc., acquired large interests in the shares of other companies.

Following the Madero Revolution in 1910, and the series of Revolutions which have since followed, railway development has come to a standstill. Traffic on most of the lines, particularly on those operating in the north and west, has been demoralized, cars and buildings have been burned, bridges dynamited and many miles of tracks torn up. The result has been that not only have dividends been reduced or passed, but interest on bonds defaulted as well. The National Rys. of Mexico have been compelled to issue interest bearing scrip instead of making payment of interest on its bonds and its credit has been virtually destroyed.

There are about 16,000 miles of railway in the Republic, a large majority of which mileage is the standard (American) 4 ft. 8½ in. gauge.

The area of Mexico is 767,000 square miles and the population upwards of 15,000,000, thus ranking fourth in area and third in population among the Republics of North and South America.

Among the railways not mentioned on the following pages we will briefly enumerate the following: (1) Kansas City, Mexico & Orient Ry. of Mexico, several disjointed portions of which, with a total mileage of about 280 miles, have been completed. This railway forms part of the Kansas City, Mexico & Orient Ry., projected by Mr. A. E. Stillwell, an American, who undertook to build a direct through line from Kansas City, Mo., to Port Stillwell or Topolobampa, State of Sinaloa, Mexico, on the Gulf of California. The Mexican section of the railway was surveyed and partly completed from

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Presido del Norte on the Texan border, via Chihuahua to Port Stillwell. The undertaking recently met with difficulties necessitating the appointment of Receivers for the Company. (2) The Mexican North Western Ry., El Paso to Chihuahua (about 366 miles). Owing to the Revolution, this railway has been practically demolished, and its finances have had to be readjusted, owing to inability to pay interest on issues of bonds. No statement of earnings have been issued since 1911. (3) and (4) Parral & Durango Ry. (66 miles) and Potosi & Rio Verde Ry. (40 miles). Both of these railways were built to serve mining properties. The first named is part standard and part narrow gauge, and the latter entirely narrow gauge. (5) The United Rys. of Yucatan. This company operates about 505 miles of railway in Yucatan. It has outstanding about \$11,500,000 stock and £825,000 First Mortgage 5% bonds due 1950.

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Interoceanic Ry. of Mexico.

(Acapulco to Vera Cruz)

Year	Avg. Miles Oper.	Gross	Year	Avg. Miles Oper.	Gross
1905-6	736	\$3,230,165	1909-10	878	\$3,993,649
1906-7	736	3,596,462	1910-11	1,033	4,432,141
1907-8	736	3,850,553	1911-12	1,024	4,481,578
1908-9	734	3,359,364	1912-13	*1,031	4,560,695

*Actual mileage operated June 30, 1913, 1,047 miles, this includes Interoceanic Ry. (594 miles); Mexican Eastern Ry. (140 miles); and Mexican Southern Ry. (313 miles).

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Ordinary.....	\$8,500,000	Deb. Stock (4%).....	\$5,750,000
Preference 1st (5%).....	7,000,000	2d Deb. Stock (4½%).....	6,500,000
Preference 2d (4%).....	5,000,000	*"B" Deb. Stock (7%).....	2,347,295

*Interest payable if earned.

Capitalization		Total	Per Mile
Stock.....		\$20,500,000	\$19,884
Debenture Stock.....		14,597,295	14,158
Total.....		35,097,295	34.042

Fixed Charges below include \$518,800 (£103,760) for rentals (including \$100,000 for rental of Mexican Eastern Ry. and \$418,800 for rental of Mexican Southern Ry.) and \$164,310 (£32,862) interest on 7% "B" (Income) Debenture Stock.

Income Account Year Ending June 30, 1913

Average miles operated, 1,031.

	Total	Per Mile
Gross Receipts.....	\$4,560,694	\$4,424
Operating Expenses.....	2,933,013	2,845
*Net Receipts.....	*1,627,681	1,579
Other Income.....	£8,136	39
*Total Net Income.....	*1,668,261	1,618
Fixed Charges.....	£242,996	1,214,980
*Surplus.....	*453,281	440

Operating Expenses

Maintenance of Way.....	\$569,106	\$552
Maintenance of Equipment.....	548,090	531
Transportation Expenses.....	1,591,633	1,544
General Expenses.....	224,184	218

Ratio of Operating Expenses to Gross Receipts, 64.3 per cent.

*These figures vary slightly from those stated in the annual report of the company, owing to the use of a slightly different basis of exchange (\$0.50 U. S. Gold to \$1.00 Mexican here used). The annual report showed Net Operating Revenue (\$3,355,362 Mexican), £322,721; Other Income, £8,136; Charges (including interest for year on 7% "B" Debenture Stock) £242,996; Surplus, £87,860.

Appropriation of Gross Income

	1912-13
For Maintenance Expenses.....	24.2%
For Traffic, Transportation and General Expenses.....	39.5%
For Fixed Charges.....	26.4%
For Surplus.....	9.9%
	100.0%
	1912-13
Ton miles per mile of road.....	108,413

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NOTES

As of June 30, 1913, 1,047 miles of road were owned or leased, as follows:—
Interoceanic Ry., 594 miles; Mexican Eastern Ry., 140 miles; Mexican Southern Ry., 313 miles.

The 4% Debenture Stock, \$5,750,000 (£1,150,000) of which is authorized and outstanding, is a first charge on the property. The \$6,500,000 (£1,300,000) 4½% Debenture Stock is a second charge on the property, following which comes the 7% "B" Debenture Stock (£470,000 authorized, £469,459 outstanding), which is entitled to 7% per annum if earned. The full interest was paid in 1912-13 on the "B" Debenture Stock.

The First Preference Stock (£1,400,000 authorized and outstanding) is entitled to 5% per annum in priority to the Second Preference Stock. The latter stock is entitled to 4% per annum in priority to the ordinary stock. 4% was paid on the First Preference Stock in 1912-13, as against 5% paid in 1911-12. No dividend was paid on the Second Preference Stock in 1912-13; 2% was paid in 1911-12. The Second Preference Stock has no vote.

The National Rys. of Mexico owns £1,310,500 Ordinary Stock, £142,800 First Preference Stock; and £102,000 Second Preference Stock of this company.

The Inter-oceanic Ry. of Mexico transferred from the surplus for 1912-13, \$165,425 (£33,085) to Reserve Account to protect advances under the agreement with the Vera Cruz Terminal Co. by this railway and by three other railways entering Vera Cruz, to make up any amount by which the Revenue of the Terminal Co. fell short of its Working Expenses and Debenture Interest.

Owing to the Revolution in Mexico the Net Profits of the Mexican Southern Ry. (leased) were only £58,095 or £25,665 less than the Rental.

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Mexican Ry.

	Year	Avg. Miles	Gross	Surplus
	1912	Oper. 374	\$4,377,509	*\$1,649,528
*Estimated.				
Stock Outstanding December 31, 1912			Bonds Outstanding December 31, 1912	
Ordinary.....	\$11,273,600		Debenture Stock (6%)...	\$10,000,000
1st Preference (8%).....	12,770,500		2d Debentures.....	2,445,000
2d Preference (6%).....	5,059,800			
Capitalization				
		Total		Per Mile
Stock.....	£5,820,780	\$29,103,900		\$77,818
Bonds.....	2,489,000	12,445,000		33,275
Total.....	8,309,780	41,548,900		111,093
Income Account Year Ending December 31, 1912				
Average miles operated, 374.				
		Total		Per Mile
Operating Revenues.....		\$4,377,509		\$11,705
Operating Expenses.....		2,010,707		5,376
Net Operating Revenues.....		2,366,802		6,329
Other Income.....		*10,226		27
Total Net Income.....		*2,377,028		6,356
Fixed Charges.....		*727,500		1,946
*Surplus.....		*1,649,528		4,410
Operating Expenses				
Maintenance of Way.....		\$308,232		\$824
Maintenance of Equipment.....		376,726		1,007
Transportation Expenses.....		1,136,866		3,040
General Expenses.....		188,883		505
Ratio of Operating Expenses to Operating Revenues 45.9 per cent.				
*Estimated; approximately correct.				
Appropriation of Gross Income				
		1912		
For Maintenance Expenses.....		15.6%		
For Traffic, Transportation and General Expenses.....		30.2%		
For Fixed Charges.....		16.6%		
For Surplus.....		37.6%		
		100.0%		
Miles, second track and sidings.....				
		1912		
		68.0%		

NOTES

This Company operates a line of railway extending from Vera Cruz to the City of Mexico (263 miles), with branches, Apizaco to Puebla (29 miles) Ometusco to Pachucha (29 miles) to Zacatlan (33 miles) and to Huatusco (20 miles).

The First Preference Stock of the Company was issued in 1874 to holders of 8% bonds. The stock has been receiving the full dividend since 1910, prior to which date the dividends paid were as follows: 1909, 7 3/16%; 1906 to 1908, 8%; 1905, 6 3/16%; 1904, 5 1/2%.

The Second Preference Stock was issued in 1874, in lieu of overdue interest and ranks after the First Preference Stock, being entitled to dividends up to 6% per annum. This rate was paid from 1910 to 1913, inclusive; in 1909, 2 3/4% was paid; in 1908, 1/8%; in 1907, 5/8%; in 1906, 3 13/16%.

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The Ordinary Stock is entitled to the balance of dividends declared during each year. This stock received $\frac{3}{8}\%$ in 1910; $1\frac{9}{16}\%$ in 1911; $3\frac{3}{8}\%$ in 1912; $2\frac{1}{2}\%$ was paid in the first half of 1913.

The Perpetual 6% was issued in 1880 and is a first charge on the undertaking, being followed by the $4\frac{1}{2}\%$ Second Debentures.

This railway was originally incorporated in 1864 as the Imperial Mexican Ry. and the Republic gave it an annual subvention of \$560,000 a year for twenty-five years, and agreed not to subsidize any other railway between Vera Cruz and the City of Mexico for sixty-five years, from November, 1868.

In August, 1913, the Mexican Ry. acquired the San Marcos & Huajuapam De Leon Ry. (54 miles).

Mexican Northern Ry.

Year	Avg. Miles Oper.	Gross	Surplus	Year	Avg. Miles Oper.	Gross	Surplus
1905-6	81	\$262,961	\$161,096	1909-10	81	\$288,643	\$112,319
1906-7	81	248,943	74,871	1910-11	81	256,731	152,138
1907-8	81	422,074	197,819	1911-12	81	235,873	139,142
1908-9	81	345,330	154,272	1912-13	81	*167,842	*86,892

*Decrease due to Mexican Revolution. (See below)

Stock Outstanding June 30, 1913		Bonds Outstanding June 30, 1913	
Common.....	\$3,000,000	Fixed Interest.....	\$708,000
Capitalization			
		Total	Per Mile
Stock.....		\$3,000,000	\$37,037
Bonds.....		708,000	8,741
Total.....		3,708,000	45,778

Income Account Year Ending June 30, 1913

Note: Owing to the Revolution in Mexico, Operations were suspended April 9, 1913.
Average miles operated 81.

	Total	Per Mile
Operating Revenues.....	\$167,842	\$2,072
Operating Expenses.....	85,501	1,056
Net Operating Revenues.....	82,341	1,016
Other Income.....	55,173	682
Total Net Income.....	137,514	1,698
Fixed Charges.....	50,622	625
Surplus.....	86,892	1,073

Operating Expenses

In Company's annual statements operating expenses are not sub-divided.
Ratio of Operating Expenses to Operating Revenues 51.0 per cent.

Miles, yards and sidings..... 4

NOTES

This railroad extends from Escalon, in the State of Chihuahua (on the National Rys. of Mexico) to Rincon and San Mojad in the State of Coahuilla. The railway handles largely Products of Mines.

Dividends have been paid on the stock in recent years as follows: 1902, 2%;

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1903, 1%; 1909, 4% and 11% back dividends from 1903 to 1908; 1910 to 1912, 4% each; 1913, 2% (May).

The \$708,000 First Mortgage 6% bonds due 1930 are secured by a first lien on the property.

On April 9, 1913, operations were suspended owing to the Revolution in Mexico.

Both the stock and bonds are listed on the New York Stock Exchange.

National Rys. of Mexico.

(Figures reduced to Gold at 50 cents for the silver dollar.)

Year	Avg. Miles Oper.	Gross	*Surplus	Year	Avg. Miles Oper.	Gross	*Surplus
1908-9	5,227	\$24,402,761	\$1,844,979	1911-12	6,008	\$30,723,895	\$1,942,288
1909-10	5,262	26,281,147	2,464,111	1912-13	†6,090	28,685,141	412,916
1910-11	6,132	30,967,211	2,352,844				

*Surplus here given before deductions made account of "Sundry Adjustments of Operating Expenses," this item was \$700,000 for 1911-12. †388 miles narrow gauge.

Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913		
Common	.....	\$74,803,466	Fixed Interest	.....	\$135,549,919
Preferred 1st (4%)	.....	28,831,000	†Bonds Assumed	.....	57,796,500
*Preferred 2d (5%)	.....	120,349,267	Notes	.....	86,836,791
Undeposited Stock and Income Bonds	.....	603,700	Equipment	.....	1,443,839
			Undeposited Bonds	.....	1,392,347

*Does not include \$4,191,463 in Treasury unpledged. †National R. R. of Mexico \$47,740,000; Mexican International R. R. \$10,056,500.

Note: The Coupons due February, 1914, on the 4½% Prior Lien bonds of the N. Rys. of Mex. and the N. R. R. of Mex. received par in Notes in lieu of cash.

Capitalization

	Total	Per Mile
Stock
Bonds
Total

Fixed Charges below include \$39,124 for Rentals and \$334,391 for Hire of Equipment.

Income Account Year Ending June 30, 1913

Average miles operated, 6,090.

	Total	Per Mile
Gross Receipts
Operating Expenses
Net Receipts
Other Income
Total Net Income
Fixed Charges (including for Taxes, \$211,361)
*Surplus

Operating Expenses

	Total	Per Mile
Maintenance of Way
Maintenance of Equipment
Conducting Transportation
General Expenses

Ratio of Operating Expenses to Gross Receipts, 63.2 per cent.

*This Surplus before deducting \$51,135 for Sundry Adjustments of value of materials purchased and of bonds owned.

Appropriation of Gross Income

	1912-13	1911-12	1910-11	1909-10	1908-9
For Maintenance Expenses	30.9 %	33.3 %	31.7 %	27.3 %	25.4 %
For Traffic, Transportation and General Expenses	30.7 %	27.6 %	30.8 %	31.4 %	32.7 %
For Fixed Charges	37.0 %	33.0 %	30.0 %	32.1 %	34.5 %
For Surplus	1.4 %	6.1 %	7.5 %	9.2 %	7.4 %
	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
	1912-13	1911-12	1910-11	1909-10	1908-10
Ton miles per mile of road	204,781	239,452	247,034	240,358	
Passenger miles per mile of road	76,277	78,344	70,872	73,251	
Miles, yards and sidings	901	880	836	635	

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NOTES.

The first preferred stock is entitled to dividends of 4% per annum in priority to the second preferred, which class of stock is to receive 5% before the common stock receives any dividend. Dividends were paid on the first preferred stock as follows: 1% each February, 1909; August, 1909, and February, 1910, 2%; in August, 1910, 2%, and semi-annually thereafter, including February, 1913. In August, 1913, the dividend was passed. The revolution in Mexico caused a large decrease in the earnings for 1912-13.

Owing to the decrease in earnings due to the revolution the January, 1914, coupons on bonds were paid with \$2,460,341 6% three-year Notes at par. The Notes were secured by £595,580 Mexican Government 6% bonds.

This company was organized in March, 1908, to take over the properties of the National R. R. of Mexico and the Mexican Central Ry., and in May, 1908, those two companies were amalgamated. The National Rys. of Mexico has since acquired and merged into its system the Mexican International R. R.

The Mexican Government holds a controlling interest in the new company. The authorized capital stock of the new company is as follows: \$75,000,000 (U. S. Currency) common stock, \$30,000,000 non-cumulative 4% first preferred stock and \$125,000,000 non-cumulative 5% second preferred stock. There has been further authorized \$225,000,000 Prior Lien 50-year 4½% bonds and \$160,000,000 General Mortgage 70-year 4% bonds, the latter guaranteed principal and interest by the Mexican Government. The 4½% bonds are to be redeemed by a sinking fund beginning in 1917, and are subject to call before maturity at 105 and interest in amounts of not less than \$10,000,000. The 4% bonds are to be retired by a sinking fund beginning in 1937, and after April 1, 1927, are subject to call at par and interest, in lots of not less than \$10,000,000. The right is reserved to issue additional bonds of this series to take up underlying bonds.

BASIS OF EXCHANGE.

Each \$1,000 par value of deposited securities received in accordance with plan of April 6, 1908.						
	Prior Lien 4½% Bonds	G'd. Gen. Mtge. 4%	1st Pfd. Shares	2nd Pfd. Shares	Com. Shares	
Deposited Bonds and Stks. Cash						
Mexican Cen. Ry., Ltd.:						
Priority 5% Bonds.....	\$700	\$475				
First Mtg. 7% Bonds.....	1,000					
Consolidated Mtg. 4%....	600	325		\$75		
First Cons. Inc. & Scrip..				1,100		
Registered Inc. & Scrip..				1,100		
Second Consol. Incomes..				1,000		
Stock.....				1,000		
National R. R. Co. of Mex.:						
Preferred Stock..... \$100			\$1,000			
Second Preferred Stock..				1,100		
Common Stock (old)....				733½	\$333½	
Deferred Stock.....					1,000	

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NEW BONDS AUTHORIZED (U. S. CURRENCY.)

The new bonds were issuable for the following purposes:

	Prior Lien 4½% Bonds	Guar. Gen'l. Mtge. 4% Bonds
In exchange for \$6,597,000 Priority 5s, \$265,062 First Mtge. 7s and \$109,020,000 Consol. Mtge. 4s of the Mexican Cent. Ry. under basis of exchange as above.....	\$70,294,962	\$38,565,075
Sold for cash.....	10,000,000	6,750,000
For betterments, improvements and equipment presently required; to take up Nat. R. R. of Mex. 5% due 1909, and for other corporate purposes.....	20,205,038	12,985,925
Mexican Govt., on account of its guaranty and other considerations.....	6,000,000	2,450,000
For retiring outstanding National R. R. of Mex. Prior Lien 4½% Bonds, due 1926.....	23,000,000	.....
For retiring outstanding Nat. R. R. of Mex., First Consolidated Mortgage 4% Bonds.....	.....	24,749,000
For issue under suitable restrictions for the construction or acquisition of the Short Line from Tampico to the City of Mexico or for the construction or acquisition of additional lines of railroad, terminals, and for betterments, improvements and equipment.....	95,500,000	74,500,000
Total (U. S. Currency).....	\$225,000,000	\$160,000,000

The right is reserved to issue additional 4½% bonds and 4% bonds, to take up, at or before maturity, an equal amount of Prior lien 4½s and Consolidated Mortgage 4s of the Mexican International R. R.

SECURITIES OUTSTANDING—GOVERNMENT OWNERSHIP.

On June 30, 1913, securities of the National Rys. of Mexico were outstanding in the hands of the public as follows (all U. S. Currency): common stock, \$74,803,467; first preferred stock, \$28,831,000; second preferred stock, \$120,349,267; Prior Lien bonds, \$84,802,315; General Mortgage bonds, \$50,747,600; Mexican International R. R. bonds, \$10,056,500; \$23,000,000 Prior Lien and \$24,740,000 First Consolidated bonds of the National R. R. of Mexico.

In addition to the securities outstanding as given above, there were held in the treasury of the company, or deposited as collateral or guarantee, or for exchange, on June 30, 1913, \$43,200 common stock, \$1,900 first preferred stock, \$4,650,733 second preferred stock, \$26,871,841 Prior Lien bonds and \$15,525,333 General Mortgage bonds; also \$9,000 National R. R. of Mexico 4% bonds (assumed), \$3,000,000 Mexican International R. R. 4% bonds (assumed), and \$4,499,000 (entire issue) of the latter company's Income bonds.

The Government of Mexico owns \$115,056,367, a majority of the stock. Of this, \$10,000,000 is first preferred, \$30,278,300 second preferred and \$74,778,067 is common stock. Of the bonds held in the company's treasury on June

THE RAILWAYS OF SOUTH

30, 1913, \$25,494,847 Prior Liens and \$15,573,800 Generals were deposited as collateral or guarantee.

The National Rys of Mexico assumed the following: \$15,740,000 5% Notes due 1910 (since retired), of the Mexican Central Ry.; \$10,000,000 Notes due 1909 (paid off at maturity), and \$50,289,000 bonds (Prior Lien 4½s and First Consolidated 4s) of the National R. R. of Mexico, of which \$47,740,000 were outstanding June 30, 1913; also bonds of Mexican International R. R. (\$10,056,500 outstanding in hands of the public June 30, 1913).

The company issued under date of June 1, 1911, \$10,000,000 two-year 4½% Notes, due June 1, 1913. These Notes were issued to meet maturing obligations (largely of Mexican Central Ry.), and were secured by Prior Lien 4½% bonds and General Mortgage 4% bonds. \$13,000,000 6% Notes matured November 15, 1913. The payment of these Notes was for the most part made prior to June 30, 1913, with proceeds derived from the sale of new Notes due in 1915. The company had outstanding on June 30, 1913, Notes Payable to the amount of \$31,836,796 including about \$27,000,000 6% two year Notes, due June 2, 1915. These Notes are authorized to the amount of £6,000,000 and will be secured by \$24,800,000 Prior Lien and \$17,000,000 General Lien bonds.

A statement follows of securities deposited up to June 30, 1913, in accordance with the plan of April 6, 1908.

SECURITIES DEPOSITED.

(U. S. Currency)

Securities of the Mexican Central Ry., Ltd.

	Total Issue	Deposited	Per Cent.	Out- standing	Per Cent.
5% Priority Bonds.....	\$6,597,000	\$5,223,000	79.2	\$1,374,000	20.8
First Mortgage Bonds.....	264,062	262,715	99.5	1,347	00.5
Consolidated Mtge. 4%....	109,020,000	109,003,000	99.9	17,000	00.1
First Income Bonds.....	32,706,000	32,518,400	99.4	187,600	00.6
Registered Income Bonds .	325,200	317,000	97.5	8,200	02.5
Second Income Bonds.....	11,284,000	11,263,000	99.8	21,000	00.2
Shares.....	59,127,100	59,066,100	99.9	61,000	00.1
Total.....	\$219,323,862	\$217,653,215	99.2	\$1,670,147	00.8

Securities of the National R. R. of Mexico

	Total Issue	Deposited	Per Cent.	Out- standing	Per Cent.
Preferred Stock.....	\$32,000,000	\$31,998,100	99.9	\$1,900	00.1
Second Preferred Stock....	22,043,600	22,001,600	99.8	40,000	00.2
Common Stock.....	284,600	156,500	55.0	128,100	45.0
Deferred Stock.....	11,021,800	11,021,800	100.0		00.0
Total.....	\$65,350,000	\$65,180,000	99.7	\$170,000	00.3

Total Number of Securities of Both Companies

	Total Issue	Deposited	Per Cent.	Out- standing	Per Cent.
Bonds and Shares	\$284,673,862	\$282,833,215	99.3	\$1,840,148	00.7

Note.—All the above amounts are in United States currency.

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SECURITIES OWNED.

The National Rys. of Mexico owned on June 30, 1913, stocks and bonds of other companies carried at a book value of \$10,865,235. A majority of these securities were pledged. There was also held on June 30, 1913, a considerable amount of bonds and stocks of companies whose lines formed a part of the System, including \$20,602,300 stocks (of a total of \$20,708,200) of the Mexican International R. R. Beginning July 1, 1910, this railroad has been operated as a part of the National Rys. of Mexico, thus adding to the mileage of the System, 905 miles of standard gauge railroad, with 180 miles of sidings. In addition to its \$20,708,200 stock and \$4,499,000 Income bonds, the Mexican International R. R. had outstanding June 30, 1913, \$5,850,000 Prior Lien 4½% bonds due 1947 and \$4,206,500 First Consolidated Mortgage 4% bonds due 1977, most of the latter guaranteed by the National R. R. of Mexico.

In 1910-11, all of the stock of the Vera Cruz to Isthmus R. R. (293 miles operated) was acquired, and on November 10, 1913, this railroad (operating about 300 miles) was merged into the System. This line, together with the Tehautepec Ry., forms a through route from the Gulf of Mexico to the Pacific Ocean. This company has outstanding \$7,000,000 Vera Cruz & Pacific Ry. First Mortgage 4½% bonds, and guarantees jointly with three other railways £997,000 Vera Cruz Terminal Debenture bonds. Likewise practically all of the \$10,000,000 capital stock and a large amount of bonds of the Pan-American R. R. (285 miles) were acquired. The deficit from the operations of this company for 1911-12 was \$702,220. The National Rys. of Mexico guarantees the \$6,054,000 bonds of the Pan-American R. R. (\$2,567,000 owned by National Rys. of Mexico). With the control of the lines of the Vera Cruz to Isthmus R. R., the National Rys. of Mexico has a transportation line extending from the frontier with the United States in the North to the Southern boundary with Guatemala, with the exception of some few miles covered by the Tehautepec National Ry.

The National Rys. of Mexico controls the Interoceanic Ry. of Mexico, Ltd., a company operating 1,056 miles of narrow gauge road (including Mexican Southern Ry. Ltd., 302 miles). The National Rys. owns £1,310,500 of the £1,700,000 ordinary stock and £142,800 and £102,000 of the £1,400,000 and £1,000,000 first and second preferred stock of this company. Dividends of 5% and 4% respectively were paid on the first preferred stock in 1911-12 and 1912-13. 2% was paid on the second preferred stock in 1911-12. No dividend was paid on this class of stock in 1912-13, also £1,038,450 (£1,300,000 outstanding) 4½% Second Debenture Stock. The Interoceanic Rys. of Mexico also has outstanding approximately £1,150,000 and £470,000 Debenture Stock and "B" Debenture Stock. In 1912-13, earnings were: gross, \$4,560,695; net, \$1,627,681; surplus about \$448,670.

GENERAL

As of June 30, 1913, main track and branches (including narrow gauge) of the National Rys. of Mexico contained:

758 miles of 85-pound rail,	25 miles of 65-pound rail,
12 miles of 83-pound rail,	125 miles of 61½-pound rail,
1728 miles of 75-pound rail,	271 miles of 60-pound rail,
951 miles of 70-pound rail,	1477 miles of 56-pound rail,
132 miles of 66-pound rail,	713 miles of lighter weights.

Of the total mileage of the System in operation June 30, 1913, 5,748 miles were standard gauge and 387 miles were narrow gauge.

THE RAILWAYS OF SOUTH

Among the lines directly operated were the following: Mexico to Rio Grande River Bridge (802 miles), Mexico to Ciudad Juarez (1224 miles), Tampico to Monterey and Gomez Palacio (548 miles), Chicalate to Tampico (406 miles), Irapuato to Manzanillo (382 miles), Torreon to Saltillo (191 miles), Matamoras Branch (205 miles), Matamoras to Durango (171 miles), Mexico to Acambara (172 miles), etc.

47.3% of the total freight tonnage handled in 1912-13 consisted of Mineral Products, as compared with 49.8% in 1911-12. Other commodities handled in 1912-13 were: Forest Products, 11.8%; Agricultural Products, 24.7%; Animal Products (Live Stock, etc.), 4.5%. General Merchandise, 11.7%;

The balance sheet as of June 30, 1913, showed Working Assets (including \$6,089,579 material and supplies and \$8,340,432 cash, of which \$7,646,969 to meet maturing bonds and coupons due, etc.), \$21,001,763 and Working and Accrued Liabilities (including \$31,836,769 Notes Payable), \$44,493,798.

See Interoceanic Ry. of Mexico.

Southern Pacific R. R. of Mexico.

Year	Avg. Miles Oper.	Gross	Deficit	Year	Avg. Miles Oper.	Gross	Deficit
1910-11	928	\$1,833,271	\$2,248,046	1912-13	1242	\$2,072,384	\$2,517,950
1911-12	949	1,613,291	2,480,433				

Note: The Revolution in Mexico has caused a very large loss in Gross Earnings and abnormal Operating Expenses, thus explaining in part the large deficits shown above.

Stock Outstanding	Bonds Outstanding
Common.....	Advances by the So. Pac. Co.
\$75,000,000	\$38,255,739

Capitalization

	Total	Per Mile
Stock.....	\$75,000,000	\$60,386
Bonds.....	38,255,739	30,802
Total.....	113,255,739	91,188

Fixed Charges below include \$2,731,076 for Interest on Open Account with the Southern Pacific Co. and \$67,329 for Hire of Equipment and Other Charges.

Income Account Year Ending June 31, 1913 (Estimated)

Average miles operated, 1,242.

	Total	Per Mile
Gross Receipts.....	\$2,072,384	\$1,669
Operating Expenses.....	1,837,535	1,480
Net Receipts.....	234,849	189
Other Income.....	53,163	43
Total Net Income.....	288,012	23
Fixed Charges (including for Taxes, \$7,560).....	2,805,962	2,252
Deficit.....	2,517,950	2,029

Operating Expenses

	Total	Per Mile
Maintenance of Way.....	*	*
Maintenance of Equipment.....	*	*
Traffic and Transportation Expenses.....	*	*
General Expenses.....	*	*

Ratio of Operating Expenses to Gross Receipts 88.7 per cent.

*Not subdivided in the annual report of the company.

Appropriation of Gross Income

	1912-13
For Maintenance, Traffic, Transportation and General Expenses.....	97.6%
For Fixed Charges.....	131.9%
For Surplus.....	Deficit

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NOTES

The Southern Pacific R. R. of Mexico, incorporated June 24, 1909, as the successor to the Cananea, Yaqui River & Pacific R. R., and owned by the Southern Pacific Company, which owns the entire \$75,000,000 stock, has completed or is building a system of railways in the Republic of Mexico, consisting of upwards of 1,500 miles of main track.

The railway extends from Nogales on the border between Arizona, U. S. A., and Sonora, Mexico, through the latter state, via Magdalena, Hermosillo and other places to the Port of Guaymas, located on the Gulf of California, thence keeping near the coast it continues to Corral, where it meets an extension running northerly to Tonichi and projected to Nacorazi and to Douglas, Ariz. From Corral the railway runs southeasterly to Navojoa where there is a branch to Alamos, and into the State of Sinaloa, passing Culiacan (the capital), Quila (junction of a branch to the Port of Eldorado), Mazatlan, Acaponeta and Tepic. From the latter city the line is to be continued on to near Guadaluajara to meet the National Rys. of Mexico's line to Mexico City. Owing to the existing Revolution in Mexico, the completion of the unfinished mileage has been delayed. The unfilled gap amounts to 99 miles; (Tepic to La Quamadi; from the latter point southward 44 miles have been completed).

The earnings as presented in the table just preceding do not furnish any information as to the earning capacity of the road, as will be explained in the next paragraph, but are given for the sake of record only.

The Southern Pacific R. R. of Mexico, during the year, continued to suffer from revolutionary disturbances. Not only were structures and equipment destroyed, but business was practically suspended and development of prospective traffic retarded. It is estimated that the loss on account of interruption to traffic, from the beginning of the Madero Revolution, in 1910, to June 30, 1913, amounted to approximately 6,000,000 pesos. During this period the cost of maintaining the property has amounted to about 1,020,000 pesos in excess of the revenue collected. Claims for loss and damage caused by the revolutionary disturbances, amounting to 287,800 pesos, have recently been approved by the Mexican Government, but have not been paid. Claims amounting to 862,200 pesos, covering additional losses, will be presented to the Mexican Government in due course. On account of the fluctuation in the rate of exchange, due to the revolutionary disturbances in Mexico, it is not practicable to state these amounts in U. S. Gold.

On June 30, 1912, the Sonora Ry. (263 miles—Sonora to Guaymas), previously leased from the Atchison, Topeka & Santa Fe Ry., was purchased by the Southern Pacific R. R. of Mexico. This mileage is included in that of the lines described above.

As stated on the Table Page the Southern Pacific Company had advanced to this railway to June 30, 1913, \$38,255,739, as against \$39,026,799, June 30, 1912, \$38,138,721, June 30, 1911, and \$35,965,602, June 30, 1910. The interest on these advances, although included in the Fixed Charges of the Southern Pacific R. R. of Mexico, has not been taken into the Income Account of or otherwise credited to the Southern Pacific Company.

THE RAILWAYS OF SOUTH

GUATEMALA, SALVADOR AND BRITISH HONDURAS.

Guatemala.

During 1912 there was effected a consolidation of the Guatemala Central R. R. (139 miles from the capital to the Pacific), the Guatemala R. R. (195 miles from the capital to Puerto Barrios on the Caribbean Sea) and the railroads belonging to the same interests in Salvador under the name of International Rys. of Central America (see that company).

The joining of this company's lines in Guatemala and Salvador, which will soon be accomplished, will give the latter Republic an Atlantic outlet. The company has continued the construction, along the western coast of Guatemala, of the Pan-American branch, which ultimately will connect the capital with the town of Ayutla, on the Mexican frontier. As the railroads of Mexico have been extended to Mariscal, across the river from Ayutla, and as an International bridge has been partially completed, through railway transportation between the United States, Guatemala and Salvador, and later with the Republics of Honduras, Nicaragua, Costa Rica, Panama, etc., will likely be realized.

The Verapaz Ry. (a German owned company), whose lines are about 28 miles long and form the outlet for the coffee of the Coban region, owns and operates also the steamboats and barges for transportation by water from the railroad terminus at Panzos, on the Polichic River, by way of this river and Lake Izabal and the Dulce River to the Atlantic port, Livingston. The railway runs from Pancajche to Panzos.

A railroad is being built by the Government of Guatemala between Quezaltenango, second city in size in the Republic, and San Felipe, which is the terminus of a branch of the International Rys. of Central America. The new line is to be about 40 miles in length when finally completed, and a large portion of it has been graded.

The total railway mileage of Guatemala at the beginning of 1913 was about 450 miles. The Republic's area, 48,290 square miles, is slightly larger than that of New York State. The population is given as 2,119,165 (about 42 per square mile).

Salvador.

The two railways at present in operation in the Republic of Salvador are described under "Salvador Ry." and "International Rys. of Central America." The former line runs from San Salvador, the capital, to the port of Acajutla, with a branch to Santa Ana, etc., (total mileage 100), while the latter railway is building from La Union to the frontier with Guatemala, where it will meet its lines operating in the latter Republic. An English Company has

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recently made the Government a proposition to build a railway from San Salvador to the Port of La Libertad. The total length of railways in operation December 31, 1912, was estimated at 160 miles.

This little country has an area of 7,225 square miles (a little smaller than the State of New Jersey) and a population of about 1,700,000. Its exports, mainly coffee, were valued at, in 1912, \$8,936,795, and its imports at \$6,774,859.

British Honduras.

There is very little to say about the railways of British Honduras. Britain's Central American colony has within its boundary, a narrow gauge line 25 miles in length, extending from Belize, the capital and principal port to Stann Creek. This little country—area 8,598 square miles; population about 45,000—has a large coast line, which is served by mail steamers running between Belize, Corozal, Caledonia, San Estevan, Orange Walk, etc., while motor boat service is provided up the Belize River as far as Cayo.

The exports of British Honduras for 1910 totalled £482,383 and the imports £580,086. The principal exports were 10,673,881 feet of mahogany, 936,708 feet of cedar, 5,545,679 cocoanuts and 2,238,500 plantains.

THE RAILWAYS OF SOUTH

International Rys. of Central America.

Year	Avg. Miles Oper.	Gross	Surplus
1912	*407	\$2,352,385	\$820,891

*Includes Guatemala Ry. (195 miles); Guatemala Central R. R. (139 miles); Occidental R. R. (51 miles); Ocos R. R. (22 miles). Does not include Pan-American Extension (14 miles) and Salvador Division (40 miles).

Stock Outstanding December 31, 1912		Bonds Outstanding December 31, 1912	
Common.....	\$30,000,000	Fixed Interest.....	\$10,850,000
Preferred (5%).....	10,000,000		

Capitalization		
	Total	Per Mile
Stock.....	\$40,000,000	\$98,280
Bonds.....	10,850,000	26,659
Total.....	50,850,000	124,939

Income Account Year Ending December 31, 1912		
Total miles operated, 407.		
	Total	Per Mile
Gross Receipts.....	\$2,352,385	\$5,780
Operating Expenses.....	1,104,369	2,713
Net Receipts.....	1,248,016	3,067
Outside Operations.....	42,972	105
Total Net Income.....	1,290,988	3,172
Fixed Charges (including for Taxes, \$4,125).....	470,097	1,155
†Surplus.....	820,891	2,017

Operating Expenses		
Maintenance of Way.....	*\$308,420	\$758
Maintenance of Equipment.....	*149,434	367
Conducting Transportation.....	*500,517	1,230
General Expenses.....	*145,998	358

Ratio of Operating Expenses to Gross Receipts, 47.0 per cent.
†This Surplus before deducting \$30,000 for Additions and Betterments.
*Approximately correct. In the annual report of the Company the Operating Expenses of the Ocos R. R. (\$48,995) are not sub-divided. In this book they are divided proportionately to the Operating Expenses of the other Lines comprising the System.

Appropriation of Gross Income	
	1912
For Maintenance Expenses.....	19.1%
For Conducting Transportation and General Expenses.....	27.0%
For Fixed Charges.....	19.6%
For Surplus.....	34.3%
	100.0%

	1912
Miles, yards and sidings.....	*45

*Includes sidings of Pan-American Extension and Salvador Division (mileage not included above).

NOTES

This company was incorporated in April, 1912, and is a consolidation of the Guatemala Ry. (195 miles), the Guatemala Central Ry. (139 miles), the Occidental R. R. (51 miles) and the Ocos R. R. (22 miles). The company's lines as they at present exist extend from Puerto Barrios on the Caribbean Sea to Guatemala City (capital of Guatemala), 194.5 miles, thence to San Jose on the Pacific Ocean (74 miles). The company is building a line from Mariscal, on the Mexican frontier, to Las Cruces, where a connection will be afforded with a branch now in operation between the latter point and Santa Maria on the main line. From Santa Maria the line will be extended southeasterly to

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Santa Ana in Salvador. When this and various other lines in Central America, which are being constructed by interests in control of this company, are completed, a direct through route will be afforded between Vera Cruz in Mexico and Panama and Colon, extending along the Western portion of Central America through the five Republics of Guatemala, Salvador, Honduras, Nicaragua and Costa Rica; also Panama. A number of branch lines will be operated including two lines to the Atlantic Coast (in Guatemala and Costa Rica).

The International Rys. of Central America has assumed the obligations of the merged companies and has authorized \$30,000,000 common stock, \$10,000,000 5% preferred stock and £4,500,000 5% bonds, due 1972 (£1,000,000 issued in 1912). In August, 1912, an initial quarterly dividend of $1\frac{1}{4}\%$ was paid on the (\$10,000,000) preferred stock. The 5% rate has since been maintained. The preferred stock is entitled to share equally in all dividends paid in any year after 5% has been paid on both issues of stock.

The interests controlling the company are identified with the United Fruit Co.

In addition to £1,000,000 5% bonds sold in 1912, the company has issued £3,500,000 Central Division Purchase Money bonds. These bonds are secured by a mortgage on the Guatemala Central R. R., subject to the latter's \$2,500,000 6% bonds due 1916, and bear interest, 2% in 1912; 3% in 1913; 4% in 1914 and 5% thereafter. The authorized amount of 5% bonds due 1962 (£4,500,000) may be increased to £6,000,000 under certain conditions.

A contract has been entered into with the United Fruit Co., whereby the railway will handle all the products of the Fruit Co., raised in the territory served by the railway. Bananas and coffee are the principal commodities handled.

The balance sheet as of December 31, 1912, shows Working Assets \$2,657,521 and Working Liabilities \$715,391. There was a credit balance to Profit and Loss to the amount of \$450,508.

The stock and bonds of this company are listed on the London Stock Exchange, also on the New Orleans Stock Exchange.

The company receives subsidies from the governments of Guatemala and Salvador varying from \$3,200 to \$7,320 per kilometer. The Government of Guatemala may purchase the lines in that Republic after 2,002 at a price to be decided on by arbitration. In Salvador, the Government of that Republic may purchase the lines located there after June, 1978, at an arbitrated price; or after 2,006 are to receive these lines, without indemnity.

THE RAILWAYS OF SOUTH

Salvador Ry.

Avg. Miles			Avg. Miles		
Year	Oper.	Gross Receipts	Year	Oper.	Gross Receipts
1911-12	100	†\$644,400	1912-13	*100	†\$610,875
		†£128,880			†£122,175

*Mileage of rail lines only; does not include mileage of steamship routes. (See Notes.)
†Does not include Subsidy from Government amounting to \$120,000 (£24,000) annually and Net Receipts from Steamship Service amounting to \$73,610 (£14,722) in 1912-13 and \$56,035 (£11,207) in 1911-12.

Stock Outstanding		Bonds Outstanding	
June 30, 1913		June 30, 1913	
Ordinary.....	\$1,250,000	Fixed Interest.....	\$4,502,000
Preference (6%).....	1,250,000		

Capitalization		
	Total	Per Mile
Stock.....	\$250,000	\$25,000
Bonds.....	900,400	45,020
Total.....	1,150,400	70,020

Fixed Charges below include \$71,985 (£14,397) paid account of Debenture Redemption Fund, and \$7,500 (£1,500) cost of Terminal Bond Issue—proportion written off.

Income Account Year Ending June 30, 1913			
Average miles operated, 100.			
	Total		Per Mile
Gross Receipts.....	\$122,175	\$610,875	\$6,109
Operating Expenses.....	89,408	847,040	8,471
Net Receipts.....	52,767	263,835	2,638
Other Income.....	39,283	196,415	1,964
Total Net Income.....	92,050	460,250	4,602
Fixed Charges.....	68,387	316,935	3,169
*Surplus.....	23,663	143,315	1,433

Operating Expenses		
	Total	Per Mile
Maintenance of Way.....	\$13,166	\$65,830
Maintenance of Equipment and Locomotive Pwr.....	20,493	102,465
Traffic and Transportation Expenses.....	20,153	100,765
General Expenses, etc.....	15,596	77,980

Ratio of Operating Expenses to Gross Receipts, 66.8 per cent.
Other Income above includes \$120,000 (£24,000) Subsidy from the Government of Salvador and \$73,610 (£14,722) net earnings from Steamship Service.

Appropriation of Gross Income		1912-13
For Maintenance Expenses.....		20.9%
For Traffic, Transportation and General Expenses.....		22.1%
For Fixed Charges.....		39.8%
For Surplus.....		17.7%
		100.0%

NOTES

The main line of the Salvador Ry. extends from the Republic's most important port Acajutla (on the Pacific Ocean) to San Salvador, the capital (sixty-five miles), with a branch to Santa Ana (twenty-five miles) and with an additional ten miles of road. The railway is the most important one in the country and does a considerable business handling coffee and other products for export (total exports of Salvador for 1912, \$9,942,184 of which \$4,860,511 was shipped from Acajutla), also building materials, general merchandise, etc. imported and shipped to the interior.

The capital authorized and outstanding was as follows on June 30, 1913:

	Authorized	Outstanding
Preference Shares (par £10).....	\$250,000	\$250,000
Ordinary Shares (par £10).....	250,000	250,000
5% Prior Lien Debentures.....	250,000	*208,400
5% Mortgage Debentures.....	660,000	*593,000
5½% Terminal Bonds.....	110,000	*99,000

*The balance of these issues have been redeemed by Sinking Funds.

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Dividends of 6% and 2%, respectively were paid on the preference shares and on the ordinary shares in both 1911-12 and 1912-13. After payments of all dividends and appropriations to reserves (see table page) a balance of £4,668 was carried forward to the credit of Net Revenue Account. The Salvador Ry. operates a steamship line and now has three steamers, each of about 1,000 tons burden, and with accommodations for twenty-four passengers. Bimonthly and trimonthly services are maintained between Salina Cruz, Mexico, and Corinto, Nicaragua, calls being made at all intermediate ports in Guatemala, Salvador, and Honduras.

The steamship line earned net in 1912-13, £14,722, as against £11,207 in 1911-12, £6,056 in 1910-11 and £2,356 in 1909-10.

The Salvador Ry. owns 2,761 shares of stock of the Acajutla Pier carried at a value of (at cost) \$72,905 (£14,581). The expenditure of this company £6,212, less dividends received £4,005, amounting to £2,207 net, was included in the Operating Expense of the Salvador Ry.

THE RAILWAYS OF SOUTH

HONDURAS, NICARAGUA AND COSTA RICA.

Honduras.

The Honduras National Ry. extends from the Caribbean Port known as Puerto Cortez, to Pimienta, a total of 57 miles. It is not as it stands to-day an important line, but the story of what it might have been forms an interesting chapter in "high finance."

The railway was first projected back in 1850 by Mr. E. G. Squier, then a United States Consul in Central America, and still famous for his wonderful books on the Latin Republics. He conceived the idea of building a railway across Honduras, starting at Puerto Cortez, which is located on one of the best harbors in Central America, to a point on the Bay of Fonseca on the Pacific side of the Republic (about 250 miles). Mr. Squier formed a company but met with great opposition from the then owners of the Panama R. R. Finally in 1858 the line was surveyed and some preliminary work done at a cost of about \$400,000, which expense was borne by the Directors. Troubles did not cease, however, and as a climax the Civil War in the United States broke out shortly afterwards, causing the abandonment of the enterprise. Being unable to secure means to resume work on the undertaking the company allowed its concession to lapse.

In 1867 the Government, realizing the necessity for the building of this railway, contracted a loan in England for £1,000,000. The bonds were issued at 80%, bore interest at 10% and were secured by the railway and its revenues, and upon the mahogany forests of the Republic. The Government undertook to provide an annuity of £140,000 from 1870 to 1884 inclusive and promised the subscribers half the profits of the projected railway for fifteen years after the redemption of the loan.

In 1869 another loan, bearing interest at 6½%, was issued in Paris at 75%. The amount of this loan was £2,490,108 (\$12,450,540). It was secured by a mortgage on the railways and forest lands, and was redeemable at par in seventeen annual installments.

In 1870, a third loan was contracted, secured by the railway and the produce of state domains. This loan, like the one of 1867, bore interest at 10%, and further was to be provided with a Sinking Fund of 3% per annum.

In the meantime, work was started on the railway and the track was laid for about 57 miles at a cost of not over \$26,500 a mile or a total of about \$1,500,000. The Government's terms to those who were constructing the road was most liberal, granting ten square miles of land for every mile of road built and other privileges. The contractors were also permitted to issue bonds on the completion of a stated mileage. The Government's belief in the good faith of the builders was such that it failed to stipulate the amount of bonds to be issued. The result was that the contractors took advantage of the situation, and three issues of bonds, totalling nearly \$30,000,-

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000 as shown above, were promptly "marketed," the purchasers, without intimate knowledge of the circumstances, being attracted by the lucrative return. The outcome of this "financing" was not hard to foretell, and in 1873, all three bond issues, together with another loan (about £75,000) which had been made in 1867 by the Republic, but which had nothing to do with the railways, went into default, the interest on the railway loans having been paid mostly out of principal. The redemption fund had, up to that time, reduced the debt to £5,398,570 (\$26,992,850).

Thus the unfortunate little country found itself saddled with an enormous debt, far beyond its means to repay, and without any funds to continue the building of the ill-fated railway.

Various attempts have since been made by the Government to settle with the bondholders, but to no avail. In 1887, Mr. Binney, the then Consul General of Honduras in London, obtained a concession for the completion of the railway, with conditions which would have enabled the Republic to have settled its obligations in full. The plan called for the exchange of the defaulted bonds with arrears of interest for £100 shares in the railway company incorporated to take over the enterprise. For lack of funds this plan fell through in 1892.

Later, in 1897, a concession was granted to the "Honduras Syndicate," an American concern, which soon became involved in a series of wrangles with the bondholders' committees. And finally, on May 26, 1903, the Government took over the existing railway and ran the same for a short period, when it was again sublet for a nominal rental.

Meanwhile, the partly completed railway was allowed to fall into deplorable condition. A bridge across the Chamelicon River, collapsed and was not replaced for upwards of a dozen years, rendering 20 miles of road useless. In 1900 this bridge was replaced, but the railway was not extended nor was its physical condition improved until during the early part of 1912 the Government of Honduras again took it over. The line was able to report a profit of \$34,289 during the first six months of national control. Part of the road was improved and railway material amounting to \$34,000 was imported from the United States.

Recently additional locomotives were purchased in the United States, increasing the total number to ten and some further work was done improving the roadbed.

The arrangements for the final settlement of the debt have never been completed, and the Republic, although it has vast resources, has been greatly hampered in its development. The £5,398,570 principal and four or five times that amount of interest remain unpaid. That Honduras was the victim of gross fraud is universally acknowledged. Her resources, though considerable, are insufficient to ever repay these obligations, nor will she be able to keep pace with her sister American Republics until means have been found to raise additional funds. In 1912, a small loan was contracted in the United States.

At the date of writing Mr. Minor F. Keith and others representing United Fruit Co. interests were negotiating with the bond holders' committees for the purchase of the railway concession and other assets securing the loans.

The total railway mileage in operation during 1913 in this Republic, was

THE RAILWAYS OF SOUTH

about 175 miles. This included the Honduras National Ry. and upwards of 115 miles of private lines built mostly to connect with the banana lands situated near the Caribbean Coast.

In October, 1912, a contract was signed by the representative of the International Rys. of Central America and the Government of Honduras for the construction of the Pan-American Ry. across Honduras, connecting Salvador with Nicaragua. This will be especially important for the Departments of Choluteca and Valle, which have both agricultural and mineral resources.

At the close of 1913 the railway of Vaccaro Bros. & Co., banana merchants, consisted of about 89 miles of main line and branches, passing through an extensive area of rich banana land. The main line extends from Ceiba in a southwesterly direction to San Juan, from which point it is being extended toward the seacoast at Boca Cerrada, to pass around the northern end of the Aguacate range of mountains and enter the Lean River Valley near Colorado, up which valley it will pass to Yoro, the chief city of the Department of the same name.

The United Fruit Co. had about 35 miles of narrow-gauge line in operation in the vicinity of Colorado at the close of 1913. The same company has also about 4 miles of tramway in use.

The Tela Fruit Co. has several miles of standard-gauge line in operation near Tela, and plans to build additional mileage in the immediate future. The Honduras Rubber Co. and the Las Palmas Plantation Co. also operate short, narrow gauge railways, and are building additional mileage. The materials and equipment used on all of these lines are of American make.

The Tela R. R. has a concession for the construction of a wharf at Tela and a 90-mile railway from that port to Progreso, passing through the rich Ulua River banana lands. The work will be pushed forward rapidly during the present year, and it is expected that at least 30 miles of the line will be completed this year.

The primary object of all the railways in this district is the transportation of bananas to the seacoast, but the Vaccaro line terminating at the port of Cerba, regularly carries both passengers and freight, as will the Tela R.R. upon completion.

Additional plans call for the building of a line from Trujillo or some other Atlantic Port to Juticalpa, Tegucigalpa (the capital), etc., a portion of which route has been surveyed. The proposed route of this railway—the Trujillo to Juticalpa Ry.—follows the valley of the Bonila River toward Ironia and continues from that point to the Sico Valley, and so on to Juticalpa (population, 20,000). This railway will open up a vast tract of rich country and will materially benefit the Republic. Its eventual completion to Tegucigalpa will mean much for the isolated capital, which is only reached from the Atlantic Coast with great difficulty, travellers preferring to go via Panama or via Guatemala, and via a Pacific Coast steamer to Amapala, the Pacific port.

The area of Honduras is about 45,000 square miles and its population is estimated at about 600,000. The principal agricultural products are bananas, coffee, cocoanuts, tobacco, rice, etc. Some cattle are exported, largely to Cuba, etc. Silver is mined in large quantities near Tegucigalpa, while opal, copper and coal mines have also been explored with more or less success.

AND CENTRAL AMERICA

Nicaragua.

Nicaragua has one important railway,—the Pacific Ry. of Nicaragua, a line with a total length of 163 miles, extending from Corinto to Diriamba (see Pacific Ry. of Nicaragua).

The Atlantic side of the Republic is not well provided with railways, there being at last accounts, not over 25 miles in operation, mostly short lines to banana plantations.

An extensive programme of railroad building has been mapped out for the future, including a line, partly surveyed, from the Caribbean port of Bluefields to Rama, on the Siquia River, continuing from that point to the shores of Lake Nicaragua, probably at San Ubaldo, the length of the road to be about 150 miles. The Pan-American Ry. will, of course, traverse the Republic. A portion of the Pacific Ry. of Nicaragua (Corinto to Grenada) will be used, but large additional mileage will have to be constructed.

Nicaragua has an area of about 49,200 square miles, being slightly larger than the State of New York, and a population of about 600,000. The foreign commerce of the Republic was last estimated at \$7,500,000, of which \$4,600,000 represented exports.

Costa Rica.

Costa Rica, like Guatemala and Panama, is possessed of a coast to coast rail route. The Caribbean or Atlantic side of the Republic is served by the Northern Ry. of Costa Rica (owned by the United Fruit Co.), which leases the British owned Costa Rica Ry. (see that company). The main line of the railway, which was a somewhat costly one to build, climbs from the Caribbean tidewater terminal Port Limon to San Jose, the capital, where connection is afforded with the Pacific Ry. of Costa Rica running to the Port of Puntarenas on the Pacific Coast (69 miles). These two lines are the nation's interior highways of commerce. The total railway mileage in actual operation was, at last reports, 427 miles (gauge 3 ft. 6 in.), of which 69 miles (Pacific Ry. of Costa Rica) belong to the Republic, 141 to the Northern Ry. of Costa Rica and 217 to the Costa Rica Ry. The Northern Ry. at last accounts was constructing a railway.

This little republic, with an area of 23,000 square miles and a population of 399,424, is perhaps the foremost of the Central American Republics. The country has great agricultural and no small amount of mineral wealth much of which remains undeveloped. The plantations of Costa Rica furnished in 1912 to the world 11,000,000 bunches of bananas, the value of this product ranking only second to the value of coffee exported. The foreign trade for 1912 amounted to \$20,258,830.

Pacific Ry. of Nicaragua.

This railway has its terminus at Corinto, the principal port of the Republic of Nicaragua, located on the Pacific Ocean. It follows the coast in a north-westerly direction for a short distance and then strikes northeasterly to Chinandegua (population 12,000), then south to Leon, which is the largest city of the Republic (population 45,000), Managua, the capital (population

THE RAILWAYS OF SOUTH

40,000), Masaya (population 20,000), Granada (population 38,000), and Diriamba, a total of 163 miles. The line was formerly known as the National R. R. of Nicaragua. The construction of the line was begun in 1884 and practically completed in 1903. The gauge used is three feet, six inches, the maximum gradient 2.8% and the rails of thirty pound to forty pound weight.

In the year 1903 the Republic leased the line to an individual for an annual rental equal to 25% of the Gross Earnings, the Lessee to spend an additional 10% yearly for maintenance and repairs. This lease was presumably cancelled during 1912.

The Pacific Ry. of Nicaragua which has succeeded the former National R. R. of Nicaragua, was incorporated in Maine, June 10, 1912, with a capitalization of \$3,300,000 common stock, 51% of which is owned by Messrs. Brown Bros. & Co. and Messrs. J. & W. Seligman & Co. of New York and the balance (49%) by the Government of Nicaragua. The property is being thoroughly rehabilitated and its management is in charge of Messrs. J. G. White & Co. of New York. No statement of earnings were available at the date of going to press.

Costa Rica Ry.

This railway is leased to the Northern Ry. of Costa Rica, which company is controlled by the United Fruit Co. The Northern Ry. of C. R. paid to the Costa Rica Ry. as rental in 1912-13 the sum of \$745,500 (£149,100). Additional receipts, mostly from interest on investments and deposits, brought the total up to \$786,164 (£157,233). Fixed charges, including \$35,500 (£7,100), redemption of Prior Mortgage Debentures, amounted to \$520,464 (£104,093). From the Surplus of \$265,700 (£53,140), \$180,000 (£36,000) was paid in dividends, representing 2% on the stock, and the balance, \$85,700 (£17,140), was transferred to "Reserve", (as against \$71,533 so transferred in 1911-12). This raised the Fund to \$736,503 (£147,301).

The Prior Mortgage Debentures are divided into two series, \$1,000,000 (£200,000) of each series being authorized of which \$1,000,000 (£200,000) and \$900,000 (£180,000) have been issued. \$258,000 (£51,600) and \$99,500 (£19,900) of the Debentures have been redeemed through Sinking Fund operations. The First Mortgage Debentures, of which \$3,275,000 (£655,000) have been authorized and issued, bear interest at 6% per annum. The Second Debentures (\$3,000,000 authorized and issued) are entitled to interest at 6% per annum, non-cumulative, if earned.

The entire \$1,000,000 stock of the Northern Ry. of Costa Rica (owned, as stated, by the United Fruit Co.) is deposited with a trustee under the provision of the lease with the Costa Rica Ry. The lease expires 1990. A total of 376 miles of road was operated by the Northern Ry. of Costa Rica on June 30, 1913. Of this mileage upwards of 217 miles belong to the Costa Rica Ry. The railroad is of 3 ft. 6 in. gauge; is well constructed, having steel and iron bridges, suitable stations and sidetracks. Excellent passenger trains carrying parlor cars are operated between the sea and the capital.

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PANAMA.

The Panama R. R., described hereafter, forms the little Republic's one highway of commerce, and its per mile earnings for years have been phenomenally large. When the Canal opens, the railroad's importance will be lessened, but its income will probably still be large. A line has been surveyed from David, an important town near the border with Costa Rica, to Empire, Canal Zone, a station on the Panama R. R., about 361 miles. This railway, when built, together with an extension to the Colombian frontier, will form a part of the proposed Pan-American System. The United Fruit Co. operates several short lines in Panama, largely to connect its banana plantations with various seaports. One of the most important of these short railways is the Changuinola Ry. running from Bocas del Toro to Sanchez, etc.

This Republic is blessed with fertile soil, has an abundant rainfall, and is otherwise fitted for extensive cultivation, stock raising, etc. Its increasing cultivation, the great number of tourists which are being attracted to its shores and the cheap labor which will be procurable upon the completion of the Canal, are adding and will continue to add to the nation's wealth, making possible railway development which will open up its resources, particularly those of the interior uplands. Panama is not without mineral wealth as gold exists and is mined, while silver, lead, aluminum and asbestos have been variously located. Copper and coal have been found near Bocas del Toro and Golfo Dulce, salt near Aguadulce, manganese at Nombre de Dios, lignite on the Canal zone, and iron in variable quantities nearly everywhere throughout the Isthmus. In regions of former volcanic activity numerous thermal medicinal springs are found.

The area of the Republic is 32,380 square miles, and the population in 1910 was 419,029. The total length of railways in operation in 1913, including the Panama R. R., the United Fruit Co.'s railroads and other narrow gauge private lines, with the exception of the first named, built largely for the banana trade but carrying publicly both freight and passengers, amounted to about 202 miles.

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Panama R. R.

Avg. Miles				Avg. Miles			
Year	Oper.	Gross	Surplus	Year	Oper.	Gross	Surplus
1907-8	50	\$4,541,438	\$1,390,017	1910-11	50	\$4,149,445	\$1,711,080
1908-9	50	4,267,162	1,522,780	1911-12	51	4,677,366	1,762,049
1909-10	50	4,224,062	1,254,778	1912-13	*62	†4,599,163	2,179,176

*Does not include mileage of Atlantic Terminal (32 miles) and Pacific Terminal (12 miles).

†Does not include \$2,151,158 Gross Revenues from Steamship Line, (\$1,996,299 in 1911-12 and \$1,860,111 in 1910-11). See below.

Stock Outstanding June 30, 1913		*Due U. S. Government June 30, 1913	
Common	\$7,000,000	For Improvements, etc.	\$1,399,115
		For Funds Advanced to Pay off Bonds	1,848,217

*In accordance with an act of Congress, March, 1911, the Company has been relieved from further payments as to principal and interest. The Company, however, until further action, is held accountable for this indebtedness.

	Capitalization	Total	Per Mile
Stock		\$7,000,000	\$112,903
Due U. S. Government		3,247,332	52,376
Total		10,247,332	165,279

Fixed Charges below include \$94,296 for Rentals.

Income Account Year Ending June 30, 1913

Average miles operated 62.		
Operating Revenues	Total \$4,599,163	Per Mile \$74.180
Operating Expenses	2,770,310	44.682
Net Operating Revenues	1,828,853	29.498
Other Income (incl. \$114,713 from Rentals)	463,908	7.482
Total Net Income	2,292,761	36.980
Fixed Charges (incl. for Income Tax., \$19,289)	113,585	1.832
Surplus	2,179,176	35.148

Operating Expenses

Maintenance of Way	\$391,193	\$6.309
Maintenance of Equipment	470,824	7.594
Traffic Expenses	13,852	2.24
Transportation Expenses	1,553,616	25.058
General Expenses	840,825	5.497

Ratio of Operating Expenses to Operating Revenues, 60.2 per cent.

Other Income above includes \$221,490 net profit from Operations of Steamship Lines (Gross, \$2,151,158; Expenses, \$1,929,668).

Appropriation of Gross Income

	1912-13	1911-12	1910-11
For Maintenance Expenses	17.0 %	16.1 %	19.4 %
For Traffic, Transportation and General Expenses	37.7 %	39.9 %	39.0 %
For Fixed Charges	2.3 %	7.2 %	1.3 %
For Surplus	43.0 %	36.8 %	40.3 %
	100.0 %	100.0 %	100.0 %

	1912-13	1911-12	1910-11	1909-10
Ton miles per mile of road	1,301,088	1,409,679	1,186,344	869,645
Passenger miles per mile of road	562,199	631,483	566,763	549,285

NOTES.

This railroad is controlled by the United States Government through stock ownership.

Dividends on the stock have been paid in recent years as follows: 1901, 2%; 1902 and 1903, 4%; 1904, 6½%; 1905, 5%; none since. The Surplus

AND CENTRAL AMERICA

Earnings for 1912-13 as reported (\$2,179,175) were equal to over 31% earned on the \$7,000,000 capital stock.

No bonds are outstanding. By Act of Congress the sum of \$2,148,217 was appropriated by the United States Government to redeem on October 1, 1907, at 105 and interest, in accordance with the terms of the Mortgage, all of the then outstanding bonds (First Mortgage 4½%) of the Panama R. R. On June 30, 1913, \$1,848,217 of this sum, together with \$1,399,115 cash appropriated through the Isthmian Canal Commission (original appropriation was \$2,786,830), remained due to the U. S. Government. The company has been released from further payments on account of principal and interest upon its indebtedness to the Government, for which, however, until further action the company is still held accountable.

This company operates directly a line of railroad in the Isthmus of Panama, extending from Colon on the Atlantic Coast to Panama on the Pacific Coast (47 miles) with a branch to the Port of Balboa (5 miles) and a second main line (8 miles); also a line of steamships, operating between Colon and New York. (See a following paragraph.) The company also controls the operations of the Atlantic Terminal (32 miles) and the Pacific Terminal (12 miles), etc. The total mileage owned and leased (including 18 miles of intermediate sidings) amounted to 143 miles.

In March, 1910, the Panama R. R. entered into a contract with the Panama Government to survey a line of standard and narrow gauge railroad extending from Empire, Canal Zone (on the main line of the Panama R. R.), to David, Panama (near the boundary line of Costa Rica), with branches. The total mileage of the proposed line aggregates 361 miles.

The Panama Steamship Co. (owned by the Railroad Co.) operates a fleet of six steamships. Four of these steamers (two of 9,606 gross tonnage and two of 5,667 gross tonnage) are chartered and two are owned (gross tonnage 3,905 and 2,605 tons, respectively). In addition, the Steamship Co. owns a considerable fleet of lighters, tugs, etc. The Gross Revenue from the Steamship Line for 1912-13 was \$2,151,158, against \$1,996,209 in 1911-12; \$1,860,111 in 1910-11 and \$1,876,727 in 1909-10, and the Net Profit was \$221,490, against a Net Loss of \$305,743 in 1911-12, a Net Profit of \$77,188 in 1910-11 and \$167,952 in 1909-10.

The Operating Revenues, per mile of road operated, of the Panama R. R., are the second largest of any railroad mentioned in this book.

Of the Net income of the company for 1911-12, \$1,385,568 was applied to additions and betterments of the plant and equipment, against \$181,533 in 1910-11.

The balance sheet of the Panama R. R. as of June 30, 1913, showed Working Assets (including \$2,973,375 cash, \$1,818,589 material, coal and supplies and \$1,590,234 marketable securities owned), \$8,017,595, and Working Liabilities, \$1,319,086. Equipment and Plant Depreciation Reserves totalled \$1,478,552, and there was a credit balance to Profit and Loss of \$15,379,522.

The business of the Commissary Department in 1912-13 amounted to \$7,630,403.

PART III.

—

THE WEST INDIES

RAILWAYS OF SOUTH AND CENTRAL AMERICA

CUBA.

On the following pages are given tables and notes descriptive of the various important railway systems of Cuba. The principal system, the United Rys. of the Havana & Regla Warehouses, has been acquiring other railways for several years and to date owns over 98% of the stock of the Western Ry. of Havana and a controlling interest in the securities of the Havana Central R. R. Late in 1913, the United Company made an attractive offer to the shareholders of the Cuban Central Rys. and to date of going to press had acquired a large block of stock. These two companies jointly maintain through passenger service between Havana and Cienfuegos, while the United Company and the Cuba R. R. (controlled by the Cuba Company) runs through express trains from Havana to Santiago. The entire island, in fact, is well served with railway lines from end to end.

Cuba has an area of 44,000 square miles and a population of 1,572,797. The total length of railroads in operation exceeds 2,000 miles.

Railway lines, in addition to those described on the following pages, include the National Rys. of Cuba, incorporated in 1912 in the United States to take over the Jucaro & Fernando (Jucaro to San Fernando, 43 miles), the Puerto Principe & Nuevitas Ry. (Camaguez to Nuevitas, 46 miles) and the North Coast Ry. (to have a total length of 200 miles). The National Rys. of Cuba has a capitalization of \$3,500,000 6% (non-cumulative) Preferred Stock and \$16,500,000 Common Stock. The Cuban American Sugar Company also operated on June 30, 1913, the Chapana R. R. operating about 155 miles of railroad between a number of sugar plantations and the company's wharves and warehouses at Juan Claro. The lines act as common carriers handling both passengers and freight.

THE RAILWAYS OF SOUTH

Cuba R. R.

Year	Avg. Miles Oper.	Gross	Surplus	Year	Avg. Miles Oper.	Gross	Surplus
1904-5	408	\$1,029,259	\$37,448	1909-10	455	\$2,500,172	\$672,089
1905-6	421	1,619,082	287,861	1910-11	602	2,994,410	797,316
1906-7	426	1,935,092	332,424	1911-12	602	3,726,339	1,059,862
1907-8	440	1,988,676	355,423	1912-13	602	4,478,194	1,414,280
1908-9	444	2,115,984	550,799				

Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913	
*Common	.....	\$10,000,000	Fixed Interest	..... \$16,030,000
Preferred (6%)	.....	10,000,000		

*Includes \$3,874,000 common stock issued in 1912-13 to the Cuba Co. which controls the Cuba R. R.

Capitalization		
	Total	Per Mile
Stock	\$20,000,000	\$32,223
Bonds	16,030,000	26,628
Total	36,030,000	58,851

In Operating Expenses below under Maintenance of Way, there is included \$96,000 for Replacement of Bridges, Trestles and Crossties. Similar Expenditures included in Maintenance of Way in previous years were: 1911-12, 1910-11, 1909-10 and 1908-9, \$96,000 annually; 1907-8, \$156,098; 1906-7, \$157,738; 1905-6, \$113,982; and 1904-5, \$20,155.

Income Account Year Ending June 30, 1913

Average miles operated, 602.

	Total	Per Mile
Gross Receipts	\$4,478,194	\$7,439
Operating Expenses	2,295,738	3,814
Net Receipts	2,182,456	3,625
Other Income (*Antilla Terminals)	33,046	55
Total Net Income	2,215,502	3,680
Fixed Charges	801,222	1,331
Surplus	1,414,280	2,349

Operating Expenses

	Total	Per Mile
Maintenance of Way	\$644,915	\$1,071
Maintenance of Equipment	324,354	539
Conducting Transportation	1,139,608	1,898
General Expenses	186,861	311

Ratio of Operating Expenses to Gross Receipts, 51.3 per cent.

*Gross \$153,846; Expenses \$120,800; Net \$33,046.

Other Income above includes \$33,046 from Hire of Equipment.

Appropriation of Gross Income

	1912-13	1911-12	1910-11	1909-10	1908-9	1907-8
For Maintenance Expenses	21.5%	20.4%	21.3%	22.4%	23.0%	29.6%
For Traffic, Transportation and General Expenses	29.4%	30.5%	32.7%	33.6%	32.2%	34.2%
For Fixed Charges	17.8%	20.7%	19.4%	17.3%	18.8%	18.4%
For Surplus	31.3%	28.4%	26.6%	26.7%	26.0%	17.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Miles, yards and sidings			1912-13 71	1911-12 68	1910-11 62	

AND CENTRAL AMERICA

The surplus to the credit of Profit and Loss as of June 30, 1913, was \$3,396,841. Current Assets as of that date (including \$729,649 material and supplies) were \$2,697,164 and Current Liabilities amounted to \$527,455.

An issue of Improvement and Equipment 5% bonds was authorized in June, 1910, to be issued in amounts not to exceed \$12,000 per mile of main track. In July, 1912, \$4,000,000 of these bonds were sold, and the proceeds used to retire \$2,000,000 6% 2-year Notes due August 15, 1912, and for extensions, etc.

About 173 miles of road, known as the "Bayamo Lines," were completed in the fall of 1910. To aid in the construction of these lines the Government of Cuba granted a subsidy of \$8,000 per mile on 154½ miles of line. These lines opened to railroad traffic a rich and well populated section of the Island.

The amount due from the Cuban Government on subsidy account, amounted on June 30, 1913, to \$821,109, payable in three equal annual installments. There was expended by the Cuba R. R. on the "Bayamo Lines" from 1909-10 to 1911-12, \$4,545,364.

From 1905 to 1913 there has been an increase in Gross Earnings of 350% and in Net Earnings of 650%.

This line, completing the railroad connection between Havana and Santiago, and Antilla, on the Bay of Nipe, is of standard gauge and similar in its construction and equipment to the better class of northern lines. All of its important bridges are of steel and masonry, and the line generally is rock-ballasted. The main line passes along the center of the eastern and wider half of Cuba, and opens up a rich agricultural region, and passes through the tropical forests of mahogany, cedar, lignum vitae, ebony and many other trees. The Parana and Guinea grasses, covering most of the open districts and standing from six to twelve feet high and green the year round; together with frequent running streams, make this an ideal cattle country. No food has to be put up and no shelter is required. The soils are adapted to sugar, tobacco, cotton, corn and an endless variety of products. The swamps which occur at places along the coasts of Cuba are absent from the interior, which is high, dry and exceptionally healthy.

The Cuba Co. which as stated previously controls this enterprise owns upward of 300,000 acres of land, including town lots and a sugar plantation, comprising 15,500 acres, also a large sugar mill at Tatibonco, and the town of Antilla, fast becoming one of the most important ports in the island.

Securities of the Cuba R. R. are listed on the New York and London Stock Exchanges.

THE RAILWAYS OF SOUTH

Cuban Central Ry.

Year	Avg. Miles Oper.	Gross Receipts	Year	Avg. Miles Oper.	Gross Receipts
1905-6	241	\$2,081,745	1909-10	241	\$2,326,550
1906-7	241	2,146,550	1910-11	255	2,300,430
1907-8	241	1,799,740	1911-12	269	2,499,910
1908-9	241	2,171,785	1912-13	297	3,088,014
		434,357			617,605

Stock Outstanding June 30, 1913			Bonds Outstanding June 30, 1913		
Ordinary.....		\$4,500,000	Fixed Interest.....		\$4,556,062
*Preference (6½%).....		6,000,000	Debenture Stock.....		4,500,000
*Cumulative.					

Capitalization			Total	Per Mile
Stock.....	£2,100,000		\$10,500,000	\$35,353
Bonds.....	1,811,212		9,056,062	30,492
Total.....	3,911,212		19,556,062	65,845

Fixed Charges below include \$43,196 (£8,639) for rentals, \$41,233 (£8,247) for Taxes (including Income Tax) and \$35,000 (£7,000) Premium Written Off.

Income Account Year Ending June 30, 1913			
Average miles operated, 297.			
	Total		Per Mile
Gross Receipts.....	\$617,603	\$3,088,014	\$10,397
Operating Expenses.....	352,689	1,768,443	5,938
Net Receipts.....	264,914	1,324,569	4,459
Other Income.....	1,996	9,981	34
Total Net Income.....	266,910	1,334,550	4,493
Fixed Charges.....	124,035	620,175	2,088
*Surplus.....	142,875	714,375	2,405

Operating Expenses		
Maintenance of Way and Telegraph.....	£105,875	\$529,374
Maintenance of Equipment.....	61,774	308,870
Traffic and Transportation Expenses.....	128,215	641,075
General Expenses.....	56,825	284,124

Ratio of Operating Expenses to Gross Receipts, 57.1 per cent.

*This Surplus before deducting £47,000 for Reserve, Renewal and Casualty Funds, etc.

Appropriation of Gross Income		1912-13
For Maintenance Expenses.....		27.0%
For Traffic, Transportation and General Expenses.....		39.9%
For Fixed Charges.....		20.0%
For Surplus.....		23.1%
		100.0%

NOTES.

This railroad (chartered 1902) is controlled by the Cuba Co. The latter company was incorporated in 1900 in New Jersey, to operate railways, traction lines and other properties in the Republic of Cuba.

The amount of common stock outstanding is \$10,000,000. This includes \$3,874,000 stock issued to the Cuba Co. in 1912-13, this amount having been due to the latter company upon completion of the railroad. An initial dividend of 4% was paid on the common stock May 1, 1913. The preferred stock is entitled to 6% per annum non-cumulative dividends. An initial semi-annual dividend of 1½% was paid on the preferred stock in August, 1909; 3% was paid in 1909-10; also 4% in 1910-11, 5% in 1911-12 and 6% in 1912-13 and in 1913-14.

The First Mortgage bonds of the Cuba R. R. mature July 1, 1952, bear interest at 5% and may be issued at \$20,000 per mile. \$12,030,000 of these bonds were outstanding on June 30, 1913.

AND CENTRAL AMERICA

This company (Registered in 1899) as of June 30, 1913, operated 337 miles of railway located in the central part of the Island of Cuba. The principal lines are as follows:

Cienfuegos to Concha or Isabela De Sagua.....	68 miles
Cifuentes to Esperanza.....	18 "
Santa Clara to Crucas.....	24 "
Palmira to Aguada.....	40 "
Caibarien to Siliecito.....	55 "
Carajuaní to Placetas del Sur.....	17 "
San Juan to Matagua.....	16 "
Caibarien to Placetas.....	23 "
Branch to Caguaguas.....	28 "

A total of 69 miles (partly included above) were opened to traffic during 1912-13.

The dividends paid by this company during recent years have been as follows:

	1900-1	'01-2 & '02-3	'03-4 to '11-12	'12-13
Preference %.....	5½	5½	5½	5½
Ordinary %.....	1	0	2	3

As of June 30, 1913, the capitalization of the company authorized and outstanding was as follows:

	Authorized	Issued
Preference Shares (5½% cum.)	£1,400,000	£1,200,000 \$6,000,000
Ordinary Shares.....	900,000	900,000 4,500,000
Debenture Bonds (4½%)...	1,000,000	*887,300 *4,436,500
Debenture Stock (5%).....	1,100,000	900,000 4,500,000

*Of which amount £88,700 (\$443,500) has been redeemed by Sinking Fund.

The par value of the Preference and Ordinary Shares is £10. The Preference Shares have the priority as to capital. The (Mortgage) Debenture Bonds and the Debenture Stock are redeemable at 110 on 6 months' notice.

The balance sheet of the Company as of June 30, 1913, showed a considerable margin of Current Assets over Current Liabilities, also large Reserve Funds.

Late in 1913 the United Rys. of the Havana & Rigla Warehouses offered £7,10s of their Ordinary Stock carrying dividends from July 1, 1913, for each £10 Ordinary Share of the Cuban Central Ry. carrying dividend due July 1, 1913. About 84,000 of the 90,000 shares were acquired up to about January 15, 1914.

The Cuban Central Rys. had in service June 30, 1913, 75 locomotives, 66 passenger cars and 2,411 freight cars.

During 1912-13 the railway handled 2,230,551 tons of sugar cane, 416,091 tons of sugar, 82,555 tons of molasses, 20,282 tons of tobacco, 115,185 tons of building material and 285,054 tons of general goods.

THE RAILWAYS OF SOUTH Guantanamo & Western R. R.

Year	Avg. Miles Oper.	Gross	Deficit	(CUBA)	Year	Avg. Miles Oper.	Gross	Deficit
1911-12	75	\$382,342	\$14,645		1912-13	75	\$440,774	\$10,105
Stock Outstanding				Bonds Outstanding				
June 30, 1913				June 30, 1913				
Common.....		\$2,750,000		Fixed Interest.....		\$600,000		
*Preferred 1st (7%).....		2,750,000		†Equipment.....		185,000		
*Preferred 2nd (5%).....		250,000		Notes.....		300,000		

*See Notes as to provisions governing the payment of dividends.

†\$25,000 paid in July, 1913.

Bills Payable, June 30, 1913, \$89,119.

Capitalization

	Total	Per Mile
Stock.....	\$5,750,000	\$76,667
Bonds.....	1,085,000	14,466
Total.....	6,835,000	91,133

Fixed Charges below include \$6,728 loss from Outside Operations (largely Boqueron Dock and Warehouse Operations).

Income Account Year Ending June 30, 1913

Average miles operated, 13.

	Total	Per Mile
Gross Receipts.....	\$440,774	\$5,877
Operating Expenses.....	377,874	5,088
Net Receipts.....	62,900	839
Total Net Income.....	62,900	839
Fixed Charges.....	73,005	974
Deficit.....	10,105	135

Operating Expenses

Maintenance of Way.....	\$121,415	\$1,619
Maintenance of Equipment.....	70,540	940
Conducting Transportation.....	144,794	1,931
General Expenses.....	41,125	548

Ratio of Operating Expenses to Gross Receipts, 85.7 per cent.

Appropriation of Gross Income

	1912-13	1911-12
For Maintenance Expenses.....	43.5%	43.5%
For Conducting Transportation and General Expenses.....	42.2%	42.1%
For Fixed Charges.....	16.6%	18.2%
For Surplus.....	Deficit	Deficit

NOTES

This company is the successor by reorganization to the Cuba Eastern R. R., Cuba Eastern Terminal, Northeastern Cuba R. R. and Eastern R. R. of Cuba, foreclosed in 1909. The line is located in the eastern part of Cuba and extends from Boqueron on the south coast via Guantanamo to a connection with the Cuba R. R. at San Louis.

The First Mortgage 6% Bonds, \$600,000 of which are outstanding, mature 1929. They were offered for subscription at the date of the reorganization at 85, with a bonus of 25% each in new Common and Preferred Stock. \$300,000 Two-Year Redeemable Notes were issued in 1912-13.

The First Preferred Stock and the Second Preferred Stock are entitled to dividends of 7% and 5% per annum respectively in priority to the Common Stock. After the Common Stock receives in any year 5% all classes of stock share pro rata in further dividends. No dividends are paid. \$2,463,000 First Preferred Stock, and \$2,463,000 Common Stock were issued as per plan of

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reorganization (1909) and offered in exchange for \$4,927,000 bonds of the former operating companies (see above). All bondholders received \$500 each in new Common and First Preferred Stock for each \$1,000 bond owned. \$110,500 (entire outstanding amount) of Second Preferred Stock was issued in exchange of \$221,000 Debentures.

As of June 30, 1913, Working Assets amounted to \$205,957, and Working and Accrued Liabilities (including \$89,119 Bills Payable), were \$122,527.

United Rys. of the Havana & Regla Warehouses, Ltd.

Avg. Miles				Avg. Miles			
Year	Oper.	*Gross	*Surplus	Year	Oper.	*Gross	*Surplus
1911-12	672	\$7,073,961	\$2,589,540	1912-13	673	\$8,133,370	\$3,102,795

*In Pounds Sterling—Gross: 1911-12, £1,414,792; 1912-13, £1,626,674, and Surplus: 1911-12, £517,908; 1912-13, £620,559.

Stock Outstanding June 30, 1913				†Bonds Outstanding June 30, 1913			
Ordinary		\$29,202,150		Deb. Stock (5%)		\$22,492,000	
Deferred Ordinary		2,467,171		Deb. Stock (4½%)		4,943,750	
*Preferred (6%)		11,413,560		Deb. Stock (4%)		6,407,277	

*Cumulative.

†See Notes for description of issues.

Capitalization			
	Total	Per Mile	
Stock	£8,616,576	\$43,082,881	\$64,016
Bonds	6,768,605	33,843,027	50,287
Total	15,385,181	76,925,908	114,303

Fixed Charges below include \$20,000 (£4,000) for Lease of Marianao Ry., \$258,750 (£51,750) for Taxes, Stamp Duties, etc., and £23,625 Hire of Equipment Expenditure.

Income Account Year Ending June 30, 1913			
Average miles operated, 673.			
	Total	Per Mile	
Operating Revenues	£1,626,674	\$8,133,370	\$12,085
Operating Expenses	892,347	4,461,735	6,630
Net Operating Revenues	734,327	3,671,635	5,455
Other Income	274,331	1,371,655	2,038
Total Net Income	1,008,658	5,043,290	7,493
Fixed Charges	388,099	1,940,495	2,883
*Surplus	620,559	3,102,795	4,610

Operating Expenses			
	Total	Per Mile	
Maintenance of Way	£186,816	\$934,080	\$1,388
Maintenance of Equipment	169,028	845,140	1,256
Traffic and Transportation Expenses	449,711	2,248,555	3,341
General Expenses	86,792	433,960	645

Ratio of Operating Expenses to Operating Revenues, 54.9 per cent.

*This Surplus before deducting \$625,000 (£125,000) transferred to Reserve Account, \$250,000 (£50,000) transferred to General Renewals Reserve; also \$100,000 (£20,000) and \$25,000 (£5,000) transferred to Pension and Insurance Accounts.

Other Income above includes \$36,920 (£7,380) Regla Warehouses—Balance: \$26,450 Reserves for Revenue Proportion of Special Works; \$437,630 (£87,526) from interest on Bonds of the Havana Central R. R., and \$864,695 (£172,937) Interest and Dividends on Investments.

Appropriation of Gross Income			
	1912-13	1911-12	
For Maintenance Expenses	18.7%	20.4%	
For Traffic, Transportation and General Expenses	28.3%	26.2%	
For Fixed Charges	20.4%	22.4%	
For Surplus	32.6%	31.0%	
	100.0%	100.0%	

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NOTES.

The preference stock of this company is limited to cumulative dividends of 5% per annum. 5% dividends were paid on this class of stock in 1911-12, and in 1912-13. $4\frac{1}{2}\%$ was paid on the ordinary stock in 1911-12. In 1912-13 the dividend rate on the ordinary stock was increased to 5%. No dividends were paid on the deferred ordinary stock. Additional deferred ordinary stock to the amount of £95,626 4s. 11d. is reserved to acquire additional shares of the Havana Central R. R. (acquired 1907). £8,754 preference stock and £95,626 ordinary were as of June 30, 1913, reserved to acquire additional stock of the Western Ry. of Havana (see following) and £1,208,533 preference and £10,940 deferred ordinary stock has been authorized but has not been issued.

Debenture and Debenture Stock issues of this company at June 30, 1913, were as follows: 5% "A" Irredeemable Debenture Stock, £380,000; 5% Consolidated Irredeemable Debenture Stock, £1,425,900; 5% Irredeemable Debenture Stock (1906), £2,692,500 (an additional £131,600 are reserved to redeem a like amount of bonds of the Old Company); 4% Redeemable Debentures and Debenture Stock, £1,281,455 (£7,217 additional Debentures are available for exchange of Havana Central R. R. 5% bonds and £34,428 are unissued); $4\frac{1}{2}\%$ Redeemable Debentures, £988,750.

The United Rys. of the Havana & Regla Warehouses, Ltd., was incorporated in 1898, and has since acquired: (1) in 1906, the Cardenas & Jucaro Ry.; (2) in 1906, the Matanzas Ry.; (3) in 1907, the Havana Central R. R.; (4) in 1911-12, the Western Ry. of Havana, Ltd. The consolidated company operates the largest railway mileage in the Island of Cuba; its gross receipts are likewise considerably the largest. The main line extends from Havana to Santa Clara (176 miles) where connection is made with the Cuba R. R. main line, affording a direct route from Havana to Santiago and other eastern points. Lines extend to all of the important cities in the western portion of the island connecting Havana with Cardenas, Matanzas, Cienfuegos and other important points. The Western Ry. of Havana, Ltd. (acquired 1911-12), extends from Havana to Guane near the western end of the island (147 miles) with branches (about 23 miles).

To acquire the £1,100,000 stock of the Western Ry. of Havana, Ltd., the United Rys. of Havana offered £4 15s. of 5% cumulative preferred stock and £10 of ordinary stock for each £10 share of the former. Over 98% of the total stock was thus acquired. The Western Rys. of Havana paid a 7% dividend in 1913.

The balance sheet as of June 30, 1913, showed among the Assets, Investments at cost (including £296,785 Deferred Ordinary Stock of the company held by the Trustees for the 5% Irredeemable Debenture Stock), \$19,351,605 (£3,870,321). This did not include \$5,874,445 (£1,174,889) First Mortgage 5% bonds and stock of the Havana Central R. R. acquired by an issue of this company's 4% Debentures and Deferred Ordinary Stock at par. These securities are held as security for the 4% Debentures of the United Rys. There was also Cash, Stores, etc., on hand, Bills Receivable, etc., to an amount considerably in excess of Current Liabilities. The company's Reserves, including amounts transferred from the surplus of 1912-13 to the various accounts, amounted to the following:

	Total	
Reserve Account.....	\$2,500,000	£500,000
Reserve for General Renewals.....	639,170	127,834
Pension Account.....	100,000	20,000
Insurance Account.....	125,000	25,000

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The stockholders of the United Rys. of the Havana & Regla Warehouses on December 9, 1913, approved of the acquisition of the ordinary stock of the Cuban Central Rys. on the basis of £7 10s. United Rys. stock for each £10 Cuban Central Rys. stock. £900,000 Cuban Central Rys. stock was outstanding June 30, 1913. This company operates an important system of railways in Central Cuba (Cienfuegos to Esperanza, Sagua la Grande, Concha, etc., etc., 309 miles).

The railway handled in 1912-13 6,749,903 tons of freight of which 5,417,193 tons consisted of Sugar Cane and Products.

See Cuban Central Rys.; Western Ry. of Havana.

Western Ry. of Havana.

Avg. Miles				Avg. Miles			
Year	Oper.	Gross		Year	Oper.	Gross	
1909-10	147	\$1,241,325	£248,265	1911-12	147	\$1,283,270	£256,654
1910-11	147	1,295,755	259,151	1912-13	147	1,406,320	281,264

Stock Outstanding		Bonds Outstanding	
June 30, 1913		June 30, 1913	
Common.....	\$5,500,000	Fixed Interest.....	\$2,950,000

Capitalization			
	Total		Per Mile
Stock.....	£1,100,000	\$5,500,000	\$37,415
Debenture Stock.....	590,000	2,950,000	20,068
Total.....	1,690,000	8,450,000	57,483

Income Account Year Ending June 30, 1913			
Average miles operated, 147.			
	Total		Per Mile
Gross Receipts.....	£281,264	\$1,406,320	\$9,567
Operating Expenses.....	166,220	831,100	5,654
Net Receipts.....	115,044	575,220	3,913
Other Income.....	10,201	51,005	347
Total Net Income.....	125,245	626,225	4,260
Fixed Charges.....	34,568	172,840	1,176
Surplus.....	90,677	453,385	3,084

Operating Expenses			
	Total		Per Mile
Maintenance of Way.....	£37,991	\$189,955	\$1,282
Maintenance of Equipment.....	59,559	297,795	2,026
Conducting Transportation.....	55,359	276,795	1,883
General Expenses.....	13,311	66,555	453
Ratio of Operating Expenses to Gross Receipts 59.1 per cent.			

Appropriation of Gross Income		1912-13
For Maintenance Expenses.....		33.5 %
For Traffic, Transportation and General Expenses.....		23.6 %
For Fixed Charges.....		11.8 %
For Surplus.....		31.1 %
		100.0 %

Ton miles per mile of road, 1912-13, 173,276.

NOTES.

This railway line extends from Havana in a southwesterly direction to Pinar del Rio, San Juan, Guam (its terminus), etc. This is the only railway serving the state of Pinar del Rio and it handles a considerable volume of

THE RAILWAYS OF SOUTH

traffic. The company purchased during 1909-10 the property of the Vuelta Abajo Steamship Co. at a cost of \$55,000 (£11,000).

There had been issued to June 30, 1913, \$2,950,000 (£590,000) of an authorized issue of \$3,666,665 (£733,333), 4½% Debenture Stock. The proceeds of the Debentures were largely used to retire 6% Debentures.

The stock of the company received dividends at the rate of 7% per annum from 1905 to 1913 inclusive.

On November 18, 1911, the tockholders of the Western Ry. of Havana were offered by the United Rys. of the Havana & Regla Warehouses (which see) £4.15s in the latter's 5% cumulative preference shares and £10 of ordinary shares for each £10 share of the Western Ry. of Havana Stock. Over 98% of the stock was thus acquired by the United Rys. of the Havana & Regla Warehouses.

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HAITI AND THE DOMINICAN REPUBLIC.

Haiti and Dominican Republic.

The railways of the Dominican Republic have a total length of approximately 150 miles exclusive of about 225 miles of private lines on large estates.

A law of the Republic is that 30% of the internal revenue shall be applied to the building of railways, either by the government or by private enterprise. In the latter case interest may be paid up to 6% of the cost and a bonus of \$2,000 per kilometer may be allowed by the Government.

The Government owns and operates the Dominican Central Ry., running between Puerto Plata and Santiago, with a branch to Moca. About 60 miles are in operation and the company owns approximately 13 locomotives, 8 passenger cars and 103 freight cars.

The other important railway of the Republic, the Samana & Santiago Ry., is described elsewhere.

Work has started upon the railroad to run from Barahona to Neybo, and then along Lake Enriquillo to the Haitian frontier, the concession for which was granted by the Dominican Congress in July, 1913.

This railroad will open a new and undeveloped part of the country. Two sawmills are now in operation within approximately five miles of Barahona but their products are now taken to the town by oxcarts for shipment. It is planned to devote the country pierced by the railroad to sugar and alfalfa, for both of which, it is believed, the soil is well adapted.

In addition to the stations and warehouses necessary for the railroad, a dock or pier and a service of boats on the lakes along the road is authorized by the concession.

The railway development of Haiti is in its infancy. The National R. R. of Haiti (described elsewhere) has under construction (partly completed) about 320 miles of railroad, while a concession has been granted for a line from Leoganes to Aux Cayes, in the southern part of the Republic, total about 100 miles. At Leoganes, this new railroad will connect with the Central R. R. of Haiti, extending to Port au Prince. There is also in operation on the island a small railroad extending from the Port of Gonawes to the town of Ennery, 20 miles inland. The line is to be extended to St. Michel.

Central R. R. of Haiti.

The company owns a railway extending from Port-au-Prince, the capital of Haiti, to the Dominican frontier (35 miles), and from Port-au-Prince to Carrefour and Leogone (22 miles). Further extensions are planned. The gauge of the railway is 2 ft. 6 in. and the rail is of 45 lb. weight. The com-

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pany owns a concrete pier in Port-au-Prince and has a 40-year monopoly for the lighting of that city and Cape Haitien.

The company at last reports had outstanding the following securities:

Stock (par \$100).....	\$1,450,000
First Collateral 6% bonds due 1919.....	800,000
Second Collateral 6% bonds due 1919.....	200,000

The equipment in service consisted at last accounts of the following: 20 locomotives, 26 passenger cars and 127 freight and service cars.

This railway is controlled in the United States.

The Income Account of the Central R. R. of Haiti (exclusive of earnings of Subsidiary Companies) for the year ending September 30, 1912, was as follows:

Interest received on Securities, etc., and Miscellaneous Receipts.....	\$111,316
Interest on Bonds and Miscellaneous Expenses.....	94,524
Net Earnings.....	16,792

National R. R. of Haiti.

NOTES

This Company has authorized and outstanding \$7,000,000 common stock and \$2,500,000 First Mortgage 6% bonds due 1960. The Government of Haiti guarantees interest at 6% on about \$32,250 per mile; also a Sinking Fund of ½% beginning 1916. The guarantees are to be secured by certain export duties. The bonds are callable at 110 as a whole or after 1916 at par in any part.

No dividends have been paid on the stock of this company.

The construction work on the National R. R. of Haiti, which is being built by the Caribbean Construction Co., of New York, is progressing rapidly. This enterprise gives employment to 4,000 or 5,000 Haitians, besides a staff of Americans.

Two sections of the road, aggregating 34 miles, were in operation September, 1913; five sections, totaling 91 miles, were under construction; and the survey of the remainder of the route has been completed. It was expected that the portion of the line from Port au Prince to St. Marc, 65 miles, would be opened to traffic in 1913, and that other sections under construction would be finished during the year. This road will doubtless aid much in the development of vast stretches of rich lands in the northern part of the island and enable producers to find markets for their goods.

The main line of this railroad, when completed, will extend from Port au Prince to St. Marc (53 miles), from there it will follow the valley of the Artibonite River for about 115 miles, and then will run northward through Bahon, Grande Riviere, etc., to Cape Haitien the principal northern seaport of Haiti, 205 miles from Port au Prince. A branch is to be constructed from Hinche

AND CENTRAL AMERICA

(on the main line) eastward to Gonaives, about 80 miles, from which point the branch will be extended northward for about 35 miles to Port de Paix. The total length of the system will be about 320 miles. The gauge is 3 feet 6 inches.

The American syndicate controlling this railroad, has secured from the Government of Haiti a plantation concession. The company will cultivate bananas and other tropical fruit. Sugar cane, rubber, cacao, etc., will also be cultivated.

The unsettled condition of the Republic has greatly hindered the successful completion of this railroad.

Samana & Santiago Ry.

Year	Avg. Miles Oper.	Gross Revenue		Year	Avg. Miles Oper.	Gross Revenue	
1909	80	\$262,758	£52,552	1911	80	\$328,786	£65,757
1910	80	289,952	57,990	1912	80	377,500	75,500

Stock Outstanding December 3, 1912			Debentures Outstanding December 31, 1912		
Common.....		\$2,128,400	Debentures (3%).....		\$317,500
Preferred (6%).....		491,350			

Capitalization			
	Total		Per Mile
Stock.....	£523,950	\$2,619,750	\$32,747
Bonds.....	63,500	317,500	3,969
Total.....	587,450	2,937,250	36,716

Fixed Charges below include \$6,385 (£1,277) for rentals of Macoris Ry., this representing 40% of the latter's Earnings.

Income Account Year Ending December 31, 1912

Average miles operated, 80.

	Total	Per Mile
Gross Receipts.....	£75,500	\$377,500
Operating Expenses.....	29,391	146,957
Net Receipts.....	46,109	230,543
Total Net Income.....	46,109	230,543
Fixed Charges.....	3,182	15,910
*Surplus.....	42,927	214,633

Operating Expenses

Maintenance of Way.....	£8,402	\$42,012	\$525
Maintenance of Equipment and Locomotive Power.....	9,113	45,564	569
Traffic and Transportation Expenses.....	9,165	45,827	573
General Expenses.....	2,711	13,554	170

Ratio of Gross Receipts to Operating Revenues 37.9 per cent.

Appropriation of Gross Income

	1912-13
For Maintenance and Locomotive Expenses.....	22.6%
For Traffic, Transportation and General Expenses.....	15.3%
For Fixed Charges.....	4.1%
For Surplus.....	58.0%
	100.0%

THE RAILWAYS OF SOUTH

NOTES

The Capital of this Company, authorized and outstanding, is as follows:

	Authorized	Outstanding
Ordinary Shares—(Par £10).....	£480,000	£425,680
Preferred Shares—(Par £10).....	120,000	98,270
3% Debentures.....	75,000	63,500

In 1912 dividends of 6% and 8% respectively were paid on the preference and ordinary shares.

As of December 31, 1912, the balance sheet showed Current Assets and Stores on hand to the amount of £31,419 as against Current Liabilities, £2,016.

The Samana & Santiago Ry. extends from Sanchez on the Bay of Samana to La Vega, with a branch to Salcedo; 33½ miles of main track are laid with 45-pound rail and 46½ miles with 35-pound rail; 21½ miles of track are laid on steel ties.

Plans have been completed for the extension of the Moca branch to connect with the Dominican Central Ry., and negotiations are in progress between the Samana & Santiago Ry. and the Government to build an extension to connect this railway with the capital (Santo Domingo). Preliminary survey work has been started on this extension which will open up a large fertile tract of country hitherto without transportation facilities.

The control of this railway is held in Scotland.

AND CENTRAL AMERICA

PORTO RICO AND JAMAICA.

The greater part of the railroad mileage of this island is operated by the American Railroads in Porto Rico. This railroad system extends from San Juan, the capital and principal port, via Arecibo, Aquadillo, Rencon and Mayaguez to Ponce, about 172 miles, thence to Guayama, about 37 miles; together with various branches.

Another line, the Porto Rico Rys., while primarily a tramway line, operates a small steam railway mileage.

There are practically no other railway lines in the island, the interior being almost without railway communication.

The railroads in Jamaica are under Government ownership and therefore are of but little interest to the investing public. The lines extend between San Antonio and Kingston; Kingston and Montego Bay, and enjoy a considerable traffic both in freight and passengers.

There were a total of 184½ miles of road in operation December 31, 1911, including about 25 miles of road owned by the United Fruit Co., which were constructed principally to carry bananas to the coast. The earnings from the operations of the Government-owned lines was £161,632 (\$808,160) and the expenses £109,942 (\$549,740); 518,474 passengers were carried.

The United Fruit Co. also has about 25 miles of railways constructed to carry bananas to the plantations to the coast.

THE RAILWAYS OF SOUTH American R. R. of Porto Rico.

Year	Avg. Miles Oper.	Gross	Year	Avg. Miles Oper.	Gross
1909	...	\$960,604	1911	...	\$1,519,030
1910	...	1,320,473	1912	255	1,428,098
Stock Outstanding			Bonds Outstanding		
Dec. 31, 1912			Dec. 31, 1912		
*Common	\$1,000,000	†Fixed Interest	.....	\$1,322,800

*\$800,000 unissued.

†Does not include bonds of Spanish company.

Fixed Charges below include \$9,709 General Expenses at New York and Paris; \$7,025 General Expenses of Spanish company, \$71,679 Annuities on the amount lent by the A. R. R. of P. R. for purchase of rolling stock, improvements, and new lines (see Notes), and \$199,080 interest and sinking fund on bonds of the Spanish Company and taxes paid to the Treasury on the bonds dealt in on the French market. The Fixed Charges and Surplus below may, therefore, be said to be those of the Spanish Company.

Income Account Year Ending December 31, 1912

Average miles operated, 255.	Total	Per Mile
Operating Revenues	\$1,428,098	\$5,600
Operating Expenses	862,857	3,384
Net Operating Revenues	565,241	2,216
Total Net Income	565,241	2,216
Fixed Charges (See Notes)	287,492	1,127
*Surplus (See Notes)	277,749	1,089

Operating Expenses

Maintenance of Way	\$228,040	\$894
Maintenance of Equipment	242,946	953
Conducting Transportation	332,559	1,304
General Expenses (in Porto Rico)	59,312	233

Ratio of Operating Expenses to Operating Revenues 60.4 per cent.

*Of the Surplus (\$277,750) \$71,405 was paid to the A. R. R. of P. R. as managing allowance and the balance (\$206,345) was payable to the Spanish Company.

Appropriation of Gross Income

	1912
For Maintenance Expenses	33.0 %
For Traffic, Transportation and General Expenses	27.4 %
For Fixed Charges	20.1 %
For Surplus	19.5 %
	<hr/> 100.0 %

NOTES

The American R. R. Co. of Porto Rico operates about 255 miles of railroad in the island of Porto Rico, as managers for a Spanish company, owning practically the entire system. The railroad extends from San Juan, the capital and principal port westward via Bayamon, Arecibo, etc., to Aguadilla; thence southward to Anasco and Mayaguez and eastward to Yanco, Ponce (the second largest city in the island), and Guayama. There are branch lines running to Boqueron, Sabana Grande, Carolina, etc. The railroad closely follows the coast line of the island. In 1913, a new station and wharf at San Juan to cost about \$100,000 and \$200,000 respectively were nearly completed. The necessary cost was, or will be, advanced by the Spanish company.

On November 15, 1906, the A. R. R. of P. R. lent the sum of \$1,194,644 for the purchase of rolling stock, improvements and new lines, on which an annuity of \$71,679 is paid to them.

The A. R. R. of P. R., as managers for the Spanish company owning the property, reported the following Net Income for 1912:

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*Annuity 6% on \$1,194,644.....	\$71,679	
*Managing Allowance.....	71,405	
Interest received on Deposits and Investments	7,004	
Total Receipts.....		\$150,088
Interest on Debentures and on short loans, together with redemption of portions of same corresponding to the liquidation of the construction account.....	\$77,727	
Redemption premium on bonds redeemed during 1912.....	2,352	
Taxes paid for quoting Debentures.....	5,140	
Additional General Expenses (above amount authorized in Operating Expenses).....	2,388	
Total Expenses.....		\$87,607
Net Profit for Year.....		62,481
The balance carried forward from 1911.....	\$121,365	
Less amount appropriated to the payment of the dividend for 1911, the bonus to the Stockholders, etc.....	48,233	
Balance.....		\$73,132
This balance added to the profits for 1912 makes a total of		\$135,613

*Included in Fixed Charges in the Table, page 165.

The earnings of this railroad for the year 1912 were somewhat affected by an outbreak of bubonic plague.

\$12,100 A. R. R. of P. R. Debentures were drawn for redemption during 1912. These Debentures are listed in Paris.

Porto Rico Rys.

This company operates a steam railway 18 miles from Rio Piedras (nine miles from San Juan) to Caguas. It controls also the entire electric railway, electric light and power business of San Juan (the capital), San Turce and Rio Piedras, also electric lighting franchises and a number of other towns and cities. The steam railway is of metre gauge. Caguas its terminal is the headquarters of the Porto Rican Leaf Tobacco Co., and the railroad will haul all of that company's freight between that point and San Juan until 1916, a 10-year contract having been made to that effect in 1906.

The Income Account of this company, 1908 to 1912 inclusive, follows (year ending December 31):

	Gross Earnings	Total Net Income	Interest and Sinking Fund	Surplus
	Gross Earnings	Total Net Income	Interest and Sinking Fund	Surplus
1908.....	\$376,244	\$172,599	\$167,265	\$5,334
1909.....	409,031	194,344	171,390	22,954
1910.....	561,662	267,759	173,429	94,330
1911.....	748,802	379,784	174,265	205,519
1912.....	828,084	373,405	160,016	213,389

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Dividends at the rate of 7% per annum have been paid regularly on the preferred stock since January, 1910. In October 1911, 1% was paid on the, common stock, 4% was paid on this class of stock in 1912 and in 1913; in January, 1914, 1% was paid. The dividends on both preferred and common stock are payable quarterly. The stocks are listed on the Exchange of Montreal, Toronto, etc.

The amount of stock and bonds outstanding was at last reports as follows:

	Authorized	Outstanding
Common Stock.....	\$3,000,000	\$3,000,000
Preferred Stock (7%).....	1,000,000	1,000,000
First Mtge. Gold 5% Bds.	3,000,000	*2,482,500
Refunding Gen. Mtge. 5%	†7,500,000	†1,335,000

*Balance retired by Sinking Fund; † £1,500,000; ‡£265,000.

The First Mortgage bonds mature 1936 and are subject to call at 105. A Sinking Fund of 1% of bonds issued plus one years' interest on cancelled bonds began November, 1908. These bonds are listed on the Montreal and Toronto Stock Exchanges. The Refunding General Mortgage bonds mature 1962 and are subject to call as a whole or for cumulative Sinking Fund of 1% of bonds outstanding on and after January 1, 1937, at 105 and interest. £600,000 of these bonds are reserved to retire the First Mortgage 5% bonds.

Barbados, Trinidad, Martinique and Other Islands of the West Indies.

In Martinique, a small railway, built by private capital, is under construction. The line will make a circuit of Fort-de-Franc and extends into its suburbs. Prior to the eruption of Mt. Pelee (1904), causing destruction of St. Pierre, a small narrow gauge line extended through that city into the interior. The material used in its construction is being utilized to build the new line. The rails, which are extremely light, are double with a groove between them, necessitating the construction of a special kind of locomotive.

The railways of Trinidad are under Government control. In 1913, there were in all 81½ miles of line in operation and 29 miles under construction. The gauge adopted is the Standard American gauge, 4 ft. 8½ in. The total cost of construction, not including the 29 miles of extensions, amounted to \$4,529,520. Gross Receipts for 1911-12 (latest figures obtainable) were \$523,931 (about \$6,429 per mile), as against \$537,679 in 1910-11. Expenditures for 1911-12 were \$320,847, as against \$329,052 in 1910-11. A total of 1,387,745 passengers were carried in 1911-12; the freight tonnage for the same year amounting to 150,531 tons. The railway employees number about 800.

There is a little narrow gauge railroad in Barbados, owned locally, which

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extends from Bridgetown the capital, to the opposite side of the island (total about 24 miles).

Tobago, Grenada, St. Vincent, Guadeloupe, Dominica and the other islands comprising the Lesser Antilles, have, as far as the writer is aware, no railways. Guadeloupe has an automobile transit line which reaches the important parts of the island and gives service sufficient for its needs. Dominica is served by a local steamer, operated by the Royal Mail Steam Packet Co., which reaches its principal towns. There would scarcely be sufficient traffic to warrant the building of railways on the other islands.

RAILWAYS OF SOUTH AND CENTRAL AMERICA

APPENDICES.

APPENDIX I

A table showing estimated mileage of railways in the countries covered by this book, 1900-01 and 1912-13.

Country	Mileage	
	1900-01	1912-13
Argentine Republic.....	10,269	20,400
Barbados.....	24	28
Bolivia.....	*500	796
Brazil.....	8,718	14,213
British Honduras.....	.....	25
Chile.....	2,880	3,800
Columbia.....	†340	614
Costa Rica.....	175	427
Cuba.....	950	2,500
Dominican Republic.....	116	(b)375
Ecuador.....	65	396
Guatemala.....	129	350
Guiana—British.....	74	94
“ Dutch.....	.....	104
“ French.....	0	0
Haiti.....	10	64
Honduras.....	60	175
Jamaica.....	185	210
Mexico.....	9,600	15,260
Nicaragua.....	140	191
Panama & Canal Zone.....	160	202
Paraguay.....	*156	232
Peru.....	(a) 1,035	1,841
Porto Rico.....	137	220
Salvador.....	75	160
Trinidad.....	80	87
Uruguay.....	1,080	1,590
Venezuela.....	529	542
Windward and Leeward Islands.....	.....	10

*Estimated.

†Does not include Panama R. R.

‡Includes Panama R. R., which in 1900 was in Colombian territory.

(a) Year 1898.

(b) Includes about 225 miles of private railway lines on the large plantation.

THE RAILWAYS OF SOUTH

APPENDIX II

LATIN-AMERICAN FOREIGN TRADE IN 1912

Central and North American Republics

Countries	Imports	Exports
Costa Rica.....	\$10,187,686	\$10,071,144
Cuba.....	125,902,241	172,978,328
Dominican Republic.....	8,217,898	12,385,248
Guatemala.....	9,822,462	15,156,537
Haiti (a).....	9,876,555	17,285,485
Honduras (b).....	4,317,314	3,080,178
Mexico.....	91,331,155	148,994,564
Nicaragua.....	2,856,305	4,545,075
Panama.....	9,871,617	2,064,647
Salvador.....	6,774,859	9,942,184

South American Republics

Countries	Imports	Exports
Argentina.....	\$375,307,865	\$465,979,518
Bolivia.....	19,308,506	35,147,965
Brazil.....	308,243,736	362,794,846
Chile.....	122,075,994	139,878,202
Colombia.....	23,964,623	32,221,746
Ecuador (c).....	11,294,704	12,692,237
Paraguay.....	5,124,438	4,084,621
Peru (d).....	25,066,354	45,871,504
Uruguay.....	51,355,200	53,040,000
Venezuela.....	20,568,939	25,260,908

(a) Fiscal year ending September 30, 1912. (b) Year 1910. (c) Year 1911. (d) Figures taken from *West Coast Leader*, dated August 7, 1913.

The above returns were compiled largely from the reports of the Pan-American Union (International Bureau of American Republics).

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APPENDIX III

The following Table shows approximately the dates of the earliest railway mileage constructed in each of the various countries of South and Central America and the West Indies:

Cuba	1837
Jamaica	1845
British Guiana	1846
Chili	1851
Peru	1851
Panama	1855
Brazil	1856
Argentine	1862
Paraguay	1863
Uruguay	1865
Venezuela	1866
Honduras	1871
Bolivia	1873
Mexico	1873
Ecuador	1876
Trinidad	1877
Nicaragua	1880
Salvador	1882
Guatemala	1884

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APPENDIX IV.

Quotations of Securities.

LATIN AMERICAN COUNTRIES.

Quotations mostly taken from "Financial Review of Reviews," London.

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Nom. amt. Nominal 1000's amt. of omittd share	Extreme Quotations.			NAME Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
	£	Stk.	During 1913 Hst. Lat.			
900	106	96	103	97	1-7	98 100
2,000	118	88	110	100	1-7	110 111
2,000	180½	105½	164	141½	17-11	171 174
2,000	100	100	110	100	1-7	106 108
1,000	108½	91	99	93	1-7	94 96
1,000	112	99	107	99	5-11	104 106
1,500	115	101	112½	104	5-11	108 111
600	113	102	112	103	5-11	107 110
480	10	12½	12½	8½	4-10	11½
298	107	91½	103	98	1-7	99 101
205	105	67½	104	99	1-7	100 102
75	95	87½	95	87½	-	89 91
2,125	131½	87	103	87	5-11	94 96
2,125	132	99	99	99	5-11	102 104
1,700	108½	91	100	91	1-7	96 98
1,700	102½	85	95	87½	1-7	89 91
3,600	116	102½	112	103	4-10	108 110
2,768	70	21	60	42	-	44 46
843	111	94½	107	101	6-12	104 106
358	100	112	107	102	6-12	104 106
290	105	56	99	89	1-7	92 94
702	100	105	99	88	1-7	92 94
34	92	76	89	77	11	77 79
967	92	74	90	76	11	78

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Nom. amt. of 1000's omitted share	Nominal amt. of share	Extreme Quotations.		During 1913 Hist.	Lat.	NAME Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb 14, 1914
		Hist.	Lat.					
500	20	20	6	15½	10½	Argentine Trans. 7% c. pf.*	1-7	3
310	Stk.	99½	65½	89	80	Do. 4% "A" debs.	1-7	11½
310	Stk.	89½	50	73	62	Do. 4% "B" debs.	7	87
440	20	9½	1½	5½	4	Arica and Tacna	6	68
1,350	Stk.	94	38	91	84	Bahia Blanca & N. W. guar.†	1½	4½
1,250	Stk.	106	83	99	84½	Do. 4½% guar.	4-10	87
2,000	10	10½	8½	9½	8½	Do. guar. (5% till '16; 4½% aft.)	4-10	89
2,450	Stk.	104½	83	97	84½	Do. 4% 1st debs.	4-10	9
3,000	Stk.	103½	90	101½	90	Do. 4½% 2nd debs.	4-10	9 9½
100	Stk.	110	96	110	102	Barranquilla Ry. & Pier 6% 1st debs.	1-7	88
683	1	11-16	3½	¾	8/9	Bolivar ordinary	11	98
293	1	¾	½	¾	13/6	Do. 5% non-cum. pref.	4-10	102
250	Stk.	106	75½	106	97	Do. 6% debs.	3-9	104
220	20	11½	3	9½	3	Brazil Gt. Southern 7% cum. pref.	-	1½
82	100	108	83	104	96	Do. 6% atg. debs.	2-8	5 7
100	100	104	60	99½	89	Do. 6% atg. debs. 1893.	2-8	83
200	Stk.	103	55	98	80	Do. 6% perm. debs.	2-8	85
350	Stk.	101	81	100	82	Brazil Nor.-East. 6% 1st debs.	2-8	65
\$32,000	Stk.	121½	29	98	29½	Brazil, common.	9	85
\$4,998	Stk.	130½	37	112	55	Do. 6% non-cum. pref.	Q	30
\$15,002	\$100	104½	49	97	49½	Do. 6% cum. pref.	Q	32
3,835	Bds.	96	74	91	76	Do. 4½% 1st mt. 60-yr. g. bds.	1-7	40
2,000	Bds.	99½	69	97½	69	Do. 5% conv. debs. 1922.	2-8	50
								77
								74
								76

*Arg. Transandine.—Arrears of Pref. div. amount to £230,000. †Bahia Blanca & N. W.—Int. 4% till 1 July, '17; 4½% after.

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Nom. amt. Nominal 1000's amt. of omitted share	Extreme Quotations.				Dividend Months shown Numerically	NAME	Last ann. Div. %	Quotation Feb. 14, 1914
	Since Dec., 1910 Hst.	During 1913 Hst.	Lst.	Lst.				
10,000	Stk. 143½	54	92½	64½	Buenos Ayres & Pacific ordinary.....		11	71
1,200	Stk. 120½	89	109	95	Do. 5% 1st pref. cum.....		2-8	5
1,000	Stk. 111	72	100	87	Do. 5% 2nd pref. non-cum.....		5-11	5
2,925	Stk. 107½	91½	101½	91½	Do. 4% 1st deba. perp.....		6-12	4
2,075	Stk. 109	93	105	96	Do. 4½% 2nd deba. red.....		6-12	4½
7,943	Stk. 108½	93	103	92½	Do. 4½% cons. deb. stk. red.....		1-7	4½
2,000	Stk. 107½	96	106½	96	Do. 5% (1912) deba. red.....		1-7	5
700	100	84	95	86	B. Ayres Cen. 4½% 1st m. deba. 1917-50.		1-7	4½
600	100	96	93	87	Do. 5% 2nd deba.....		4-10	5
23,500	Stk. 148½	109½	129	109½	Buenos Ayres Ct. Southern ordinary..		4-10	7
3,000	10	12	10½	12	Do. 4% Ext. shares 1914.....		4-10	4
8,000	Stk. 133½	109	118½	109	Do. 5% pref. non-cum.....		4-10	5
13,206	Stk. 113½	91	102	93	Do. 4% deba.....		1-7	4
1,000	1	15-16	¾	¾	Buenos Ayres Midland pref.....		1-7	1½
1,540	Stk. 105	91	100	91½	Do. 4% deb. stk.....		1-7	4
13,748	Stk. 142½	109½	128½	109½	Buenos Ayres Western ordinary.....		4-10	7
3,600	10	11½	10	11½	Do. 4% ext. shra. 1915.....		4-10	4
300	10	13½	9½	11½	Do. 5% pref. non-cum.....		4-10	5
2,552	10	11½	9½	11	Do. 4½% pref. non-cum.....		4-10	4½
6,107	Stk. 110	92	102	93½	Do. 4% deba.....		1-17	4
750	1	9-16	1/0	5-32	Cartagena (Colombia) ordinary.....		5-8	Nil
750	100	82½	34	49½	Do. 5% 1st mt. deb.....		3-9	Nil

THE RAILWAYS OF SOUTH

Nom. amt. 1000's omitted	Nom. amt. of share	Extreme Quotations.			NAME	Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
		Since Dec., 1910	During 1913					
		Hat.	Lat.	Hat.				
28,187	Stk.	121	71½	112½	100¼	Central Argentine cons. ordinary....	4-10	6 108½ 106½
812	Stk.	120¼	30	107	94	Do. def.....	10	6 100 102
8,965	Stk.	105½	97	103½	97¼	Do. 4½% pref. (non-cum.).....	4-10	4½ 101 103
10,767	Stk.	109¾	90	100	93¼	Do. 4½% deb. red. 1979	1-7	4 94 96
205	Stk.	96	79	85	79	Do. 3½% Central deb. red. 1979....	1-7	3½ 80 82
£860	£10	9½	3½	9½	6¼	Cent. Uruguay East. Exten. ordinary..	4-10	4¼ 7 7½
860	10	10½	8¼	10½	8¼	Do. 5% pref. non-cum.....	4-10	5 8¼ 9¼
1,067	Stk.	111	97	106	97	Do. perm. 5% deba	1-7	5 101 103
1,000	Stk.	9	3¼	8½	6¼	Cent. Uruguay North'n Ext. ordinary..	4-10	4¼ 7 7½
627	Stk.	109	85½	107	94¼	Do. perm. 5% deba.....	1-7	5 99 101
2,000	Stk.	114	54	106½	92½	Cent. Uruguay of Montev. ordinary...	4-10	6 98 100
500	10	12	10	11½	10¼	Do. 5½% pref. non-cum.....	4-10	5½ 10¼ 11¼
1,100	Stk.	141	119	131	119	Do. perm. 6% deba	4-10	6 124 126
970	100	93	72	91	81	Do. 4% W't. Ext. deba. red. 1960...	4-10	4 84 86
250	Stk.	107	96½	103	98	Do. 6% 2nd deba.....	1-7	6 101 103
2,000	Bda.	101½	94	101½	94	Chilian Northern 5% 1st mt.*	1-7	5 95 97
278	100	101	74	91	76	Chilian Transand. 5% deba. "A".....	1-7	5 77 80
539	...	101	70	91	77	Do. do. "B".....	1-7	5 77 80
668	...	101	71	91	71	Do. do. "C".....	1-7	5 77 80
180	100	106	72	96	86	Colombian Nat. 6% 1st deba.....	1-7	6
125	...	92	53	91	75¼	Do. 6% Customs. guar. bnda. 1949.	3-9	6 90 92
158	Bda.	92	53	92	73½	Do. 6% (1908) Customs gd. bda....	1-7	6 89 91
180	...	83½	74½	87¼	79	Colombian Northern 5% deba.....	5-11	5 84 86

*Chilian Northern.—Int. and Sinking Fund guar. by Chilian Govt.

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Nom.amt. 1000's amt. of omitted	Nominal share	Extreme Quotations.		NAME	Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
		Since Dec., 1910	During 1913				
		Hst.	Hst.				
612	...	83	64	71	64	1-7	3 67 69
3,961	Stk.	54½	40	54½	40	5-11	2½ 47 48
107	...	39	32	37	32	-	- 37 39
1,440	Stk.	89	82	89	82	5-11	5 87 88
962	Stk.	81	69¾	81	69¾	5-11	5 78 80
700	...	64½	49	63¾	49	-	- 63¾ 64½
8,000	Stk.	88	79¼	86	79¼	4-10	4 87 88
3,700	Stk.	87½	77	87½	77	1-7	4½ 82½ 83½
1,800	Stk.	49¾	13¼	49	41	5	2 42 44
148	...	108	96	103	97	3-9	5 100 102
160	100	105	96	103	97	3-9	5 100 102
655	100	109½	98	104	99	1-7	6 100 102
600	100	105	73	102	98	3-9	6 100 102
\$10,000	Stk.	108½	40	105	99¾	2-8	6 101 103
\$12,030	1000	108	94	106	99	1-7	5 102 104
\$4,000	1000	103	96	101¼	96	5-11	5 99 101
000	10	7½	3¼	6½	4¾	10	3 6¾ 6¾
1,200	10	12½	8¾	10¾	9½	4-10	5½ 10¾ 10¾
799	100	110	94	101	94	2-8	4½ 99 101
900	Stk.	103½	97	101	97	-	5 101 103
30	100	110½	89	102	97	1-7	6 100 102

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Nom. amt. Nominal 1000's amt. of omitted share	Extreme Quotations.			NAME	Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914	
	Since Dec., 1910	During 1913						
	Hat.	Let.	Hat.	Let.				
165 Stk.	47	15	47	27	Bemerara Ry. ordinary stock.....	4-10	Nil	33 38
115 Stk.	126	86	112	102	Do. 7% cum. perp. pref.....	4-10	7	108 111
312 Stk.	94	70	90	78	Do. 4% cum. exten. pref.....	4-10	4	84 87
70 Stk.	100½	86	95	86	Do. 4% perp. deba.....	4-10	4	90 93
350 10	7¼	1½	7¼	5¼	Dorada Extension ordinary.....	1-7	4	6¼ 7¼
341 Stk.	103	84	103	97	Do. 6% 1st mort. deba. red.....	1-7	6	100 102
1,783 Stk.	88	9	78½	54	Entre Rios Railways ordinary.....	10	Nil	55 57
2,000 Stk.	110	47¼	98½	86	Do. 5% cum. 1st pref.....	5-11	5	92 94
734 Stk.	81	45¼	72	61	Do. 4% non-cum. 2nd pref.....	5-11	4	65 67
1,505 Stk.	99½	83	93	83	Do. 4% deba.....	4-10	4	37 39
700 ...	107	94	103	94	Do. 5% deba.....	6-12	5	99 101
828 Stk.	97½	92	97½	92	Do. 5% Consol. deb. red.....	3-9	5	96 97
183 20	63¼	25	63¼	25	Gt. North Cen. Col. 5% 1st mt. bds...	-	-	40 50
1,250 10	16¼	7¼	11	8¼	Great West. of Brazil Ry. ordinary....	5-11	6	9¼ 10¼
750 10	13¼	10½	12¼	10½	Do. 6% pref. non-cum.....	5-11	6	11½ 12
306 Stk.	139	111	136	129½	Do. 6% perm. deba.....	2-8	6	126 128
1,669 100	97	83	89	83	Do. 4% deba.....	1-7	4	86 88
\$10,808 1000	94	27	63½	50½	Guayaquil & Quito 5% 1st mt. gt. f...	1-7	5	58 60
\$2,177 1000	98½	76¼	92	85	Do. 6% pr. lien mort. gd. bds.....	1-7	6	87 89
1,150 Bds.	110½	103	110	103	Havana Terminal R. R. 5% mt. deba..	1-7	5	107 109
99 Stk.	110	105	109	105	Do. 5% deb. stk. red.....	1-7	5	107 109

¹Guayaquil & Quito.—Guar. by Govt. of Ecuador.

†Guayaquil & Quito.—Guar. by Govt. of Ecuador.

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Nom. amt. 1000's omitted	Nominal amt. of share	Extreme Quotations.		NAME Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
		Since Dec., 1910	During 1913			
		Hst.	Hst.			
\$30,000	\$100	23	14	Inter. of Cent. America com.....	-	20 22
\$10,000	\$100	72½	64	Do. 5% cum. pref.....	Q	5 67 70
1,000	Bds.	87	74	Do. 5% 1st mt. 60-yr. gld. bds.....	5-11	5 82 84
1,400	Stk.	96½	84½	Interoceanic of Mex. 5% 1st pref.....	11	60 62
1,000	Stk.	73½	59	Do. 4% 2nd pref.....	Nil	46 48
1,150	Stk.	99½	88	Do. 4% deba.....	3-9	4 77 79
1,300	Stk.	100½	93	Do. 4½% 2nd deba.....	5-12	4½ 82 84
469	Stk.	128	57	Do. 7% "B" deba.....	5-12	7 97 102
350	10	10½	4	La Guaira & Caracas shares.....	4-12	8 9½ 10½
370	Stk.	102	85	Do. 5% deb. stk. red. 1902.....	3-9	5 98 100
5,691	Stk.	86½	42½	Leopoldina Ry. ordinary.....	6	4 74 75
284	10	11½	10	Do. 5½% pref. non-cum.....	3-9	5½ 10½ 11
4,495	Stk.	100	84	Do. 4% deb. stk. red.....	1-7	4 90 91
625	1	9-16	5-16	Leopoldina Terminal Co. shares	0/3	7-16 9-16
1,250	100	104½	98	Do. 5% 1st db. rd. (gtd. by Leo. Ry. Co.)	1-7	5 101 103
1,000	Bds.	105½	71½	Madeira-Mamore 6% 60-yr. 1st m. bds.	4-10	6 80 82
1,600	Bds.	96	71	Do. 5½% 60-yr. 1st mt. bds. red....	4-10	5½ 74 76
400	100	107	90	Mexican East. 5% deba. red. 1904.....	6-12	5 91 93

THE RAILWAYS OF SOUTH

Nom. amt. Nominal 1000's amt. of omitted share	Extreme Quotations.		During 1913		NAME Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
	Since Dec., 1910	Hat.	Hat.	Lat.			
2,255 Stk.	65½	14½	59½	30½	Mexican Ry. ordinary stock.....	5-11	34½ 35
2,554 Stk.	149½	60½	141½	108½	Do. 8% 1st pref. non-cum.....	5-11	8 114½ 115½
1,012 Stk.	100½	22	97½	60½	Do. 6% 2nd pref. non-cum.....	5-11	6 67½ 68½
2,000 Stk.	149½	115	134	117	Do. 6% perp. deb. stk.....	1-7	6 122 125
491 100	104½	80	101	80	Do. 4½% 2nd deb. red.....	4-10	4½ 87 90
1,000 Stk.	111½	30	107½	84	Mexican Southern ordinary stock.....	2-8	5 92 94
866 Stk.	97	68½	94	76½	Do. 4% 1st mort. deb. red.....	2-8	4 77 79
\$25,000 \$100	49	5	22½	5½	Mexico North-Western, com.....	-	Nil 7 9
1,600 100	90½	64	90½	69½	Do. 6% 18-yr. prior lien bds.....	3-9	6 71 76
5,600 Bds.	88½	24	64	26½	Do. 5% 1st mt. glid. bds.....	3-9	5 30 32
200 Stk.	93½	86	93½	86	Midland Uru. Extn. 5% deb. red.....	5-11	5 90 92
600 Stk.	41	5	34½	23	Midland Uruguay ordinary.....	-	Nil 23 25
1,150 Stk.	98	51	90	74½	Do. 5% deb. stk.....	5-11	5 84 86
593 Stk.	104	85	102	94	Do. 5% prior lien deb. red.....	2-8	5 97 99
2,500 Bds.	105½	93	102½	93	Mogyana R. & Navig. 1st m. 5% st. bds.	5-11	5 99 101
1,480 10	17	5½	14½	12½	Nitrate Railways ordinary.....	4-11	7½ 13½ 14½
170 10	12½	5½	11½	10½	Do. pref. conv. ordinary.....	4-11	7 10½ 10½
170 10	6	5-16	3½	1½	Do. def. do.....	4	½ 3½ 3½
501 Bds.	108	98	108	104	Do. 5% 1st mort. bonds.....	1-7	5 104 106
400 10	15	12	14	13	North-East. of Uruguay ordinary.....	4-10	7 13 13½
400 10	15½	12½	14½	13	Do. 7% pref. non-cum.....	4-10	7 13 13½

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Nom. amt. 1000's omitted share	Nominal amt. of share	Extreme Quotations.				NAME	Div. %	Quotation Feb. 14, 1914
		Since Dec., 1910	During 1913	Dividend Months shown Numerically				
		Hat.	Lat.	Hat.	Lat.			
120	Stk.	33	5	25	19	North-Western of Uruguay ordinary...	-	19 21
584	Stk.	73	11	65	45	Do. 6% 1st pref. stk.	11	2½ 45 47
293	Stk.	41	2	28	20	Do. 5% 2nd pref. stk.	11	Nil 19 21
400	Stk.	111	72½	108	100	Do. 6% deba. 1882 perp.	6-12	6 102 104
53	Stk.	102	92	101	92	Do. 6% 2nd deb. 1894 red.	6-12	6 95 97
104	100	96	87	96	90	Pacific of Col. 5% 5-yr. atg. bds.	-	5 93 95
343	10	6	1½	5¼	5	Paraguay Central ordinary.	4-11	Nil 5 5½
600	Stk.	105	89	104¼	96	Do. 6% prior lien deb. red.	1-7	6 100 102
1,300	Stk.	73½	15¾	57¼	45	Do. 5% deb. stk. red.	5-10	Nil 46 48
154	20	8½	1-16	1½	½	Porto Alegre & N. Ham. 7% pref.	-	½ 1
460	10	4	7½	3¾	2¾	Puerto Cabello & Valen.	5	Nil 2¾ 3¼
170	Bds.	98	68	93	91	Do. 5% 1st charge coup. bds.	1-7	5 89 91
170	Stk.	86	40	86	80	Do. 5% 2nd charge deba.	5	4¾ 81 84
100	Stk.	95	90	95	90	Quarahim Int. Bridge 5% 1st deb.	3-9	5 92 95
250	10	5¼	1½	4¼	2¼	Salvador Ry. ordinary.	12	1 3 3½
250	10	9¾	4¼	7¼	5½	Do. 6% pref. non-cum.	12	6 5½ 6
211	100	104	83	100¼	97	Do. 5% prior lien deba.	3-9	5 98 100
599	100	95½	45	85	75	Do. 5% mort. deba.	2-8	5 81 83
99	100	98	93	98	93	Do. Terminal 5½% bds. red.	-	5½ 96 98
3,000	Stk.	270	157½	270	225	San Paulo (Brazil) ordinary stock.	4-10	14 240 245
1,000	Stk.	126	105½	112	105	Do. 5% non-cum. pref. stk.	4-10	5 108 110
750	Stk.	136½	110	119	110	Do. perm. 5½% deb. stk.	1-7	5½ 113 116
250	Stk.	128½	103	112	105	Do. do. 5% do.	1-7	5 104 106
1,000	Stk.	110	93	101	94	Do. do. 4% do.	1-7	4 95 97

THE RAILWAYS OF SOUTH

Nom. amt. Nominal 1000's amt. of omitted share	Extreme Quotations.		During 1913		NAME Dividend Months shown Numerically	Last ann. Div. %	Quotation Feb. 14, 1914
	Hat.	Lat.	Hat.	Lat.			
188	100	103	92	100	Sta. Marta Ry. 6% deb. red. 1950	1-7	6 97 100
3,175	Bds.	92½	73½	89½	Sorocabana 4½% 1st deba. red	4-10	4½ 79 81
900	100	95½	72	89	So. San Paulo	2-8	5 76 79
900	5	9¾	3½	7¾	Taltal Ry. ordinary	4-10	9 6¾ 7
242	100	103	94	103	Do. 4½% 1st charge deba. red	1-7	4½ 96 100
825	Bds.	99	90	96½	Unit. R. R. of Yucatan 5% 1st mt. red ..	4-10	5 91 93
5,836	Stk.	117	56	92½	U. of Hav. & Reg. Wareh. ord	4-10	5 84 85
2,281	Stk.	115	89	103	Do. 5% cum. pref	1-7	5 101 102
380	Stk.	129	103¾	116	Do. 5% "A" irred. deba.	1-7	5 112 114
1,426	Stk.	124½	96¾	114	Do. 5% cons. irred. deba.	1-7	5 108 101
2,681	Stk.	118½	100	110	Do. 5% irred. deb. stk.	1-7	5 107 109
736	...	92	72	92	Do. 4% deba. red	1-7	4 89 91
544	Stk.	92	72	92	Do. 4% deb. stk. red	1-7	4 89 91
989	19½	102	92	99	Do. 4½% deba.	1-7	4½ 95 97
101	Var.	104½	97	101	U. Rys. of Havana 5% Loan	1-7	5 99 101
125	1	9-16	¾	¾	Uruguay East Coast	-	Nil ¾ ¾
317	20	91	75	91	Do. 5% 1st mt. gd. bds.	4-10	5 83 86
185	Stk.	66	57	65	Do. 4% deb. stk. red	-	4 57 59
250	100	49	11	42½	Uruguay Northn. 7% pref. (cum.)	11	2 33 35
449	Stk.	78	39	71½	Do. perp. deba.	1-7	95/4 67 69
155	10	81	79	...	Venezuela Central 6% 1st deba.	4-10	6 79 81
134	10	35	33	...	Do. 6% 2nd deba.	-	- 33 35

